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VOL. XVIII. NO. 17.

SEPT. 1, 1890.

S W Conrad

500

PEACE ON EARTH • GOOD WILL TOWARD MEN

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CURRENT SERIALS
AUG 26 1890
DEPARTMENT OF AGRICULTURE

GLEANINGS
IN

BEE CULTURE

DEVOTED
TO

& HOME INTERESTS.

MEDINA, OHIO.

BY
A. B. ROOT

TERMS, ONE DOLLAR PER YEAR.

ENTERED AT THE POSTOFFICE, MEDINA, OHIO, AS SECOND CLASS MATTER.

ADVERTISEMENTS.

We require that every advertiser satisfy us of responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them. Patent-medicine advertisements, and others of a like nature, can not be inserted at any price.

Rates for Advertisements.

All advertisements will be inserted at the rate of 20 cents per line, Nonpareil space each insertion; 12 lines of Nonpareil space make 1 inch. Discounts will be made as follows:

On 10 lines and upward, 3 insertions, 5 per cent; 6 insertions, 10 per cent; 9 insertions, 15 per cent; 12 insertions or more, 20 per cent; 24 insertions or more, 25 per cent.

On 48 lines (½ column) and upward, 1 insertion, 5 per cent; 3 insertions, 10 per cent; 6 insertions, 15 per cent; 9 insertions, 20 per cent; 12 insertions, or more, 25 per cent; 24 insertions or more, 33½ per cent.

On 96 lines (whole column) and upward, 1 insertion, 10 per cent; 3 insertions, 15 per cent; 6 insertions, 20 per cent; 9 insertions, 25 per cent; 12 insertions, or more, 33½ per cent; 24 insertions or more, 40 per cent.

On 192 lines (whole page), 1 insertion, 15 per cent; 3 insertions, 20 per cent; 6 insertions, 25 per cent; 9 insertions, 30 per cent; 12 insertions or more, 40 per cent; 24 insertions or more, 50 per cent.

No additional discount for electrotype advertisements.

A. I. ROOT.

CLUBBING LIST.

We will send GLEANINGS—

With the American Bee-Journal, W'y	(\$1.00)	\$1.75
With the Canadian Bee Journal, W'y	(75)	1.65
With the Bee Hive,	(30)	1.20
With the Bee-Keepers' Review,	(50)	1.40
With the British Bee-Journal,	(1.50)	2.40
With all of the above journals,		5.40
With American Apiculturist,	(75)	1.70
With Bee-Keepers' Advance and Poultryman's Journal,	(50)	1.45

With American Agriculturist,	(\$1.50)	2.25
With American Garden,	(2.00)	2.60
With Prairie Farmer,	(1.50)	2.35
With Rural New-Yorker,	(2.00)	2.90
With Farm Journal,	(50)	1.20
With Scientific American,	(3.00)	3.75
With Ohio Farmer,	(1.00)	1.90
With Popular Gardening,	(1.00)	1.85
With U. S. Official Postal Guide,	(1.50)	2.25
With Sunday-School Times, weekly,	(1.50)	1.75
With Drainage and Farm Journal,	(1.00)	1.75
With Illustrated Home Journal,	(1.00)	1.75
With Orchard and Garden,	(50)	1.40
With Cosmopolitan, (new sub. to Cos.)	(2.40)	2.40

[Above Rates include all Postage in U. S. and Canada.]

GLOBE BEE-VEIL



A center rivet holds 5 spring-steel bars like a globe to support the bobinet Veil. These button to a brass neck-band, holding it firmly—\$1.00.

We have some damaged Veils which we will mail for 60 cents—just as good as any but SOILED by smoke in a recent fire. Two for \$1.10. Special rates to dealers, by the doz.

THOS. G. NEWMAN & SON,

246 East Madison Street, CHICAGO, ILL.

Please mention this paper.

13-15-17d

UNTESTED Italian Queens, 75c each, three for \$2.00. Tested \$1.00. H. G. FRAME, 16tfd North Manchester, Ind.

IF YOU ARE IN WANT OF BEES or BEE-KEEPERS' SUPPLIES,

Send for our New Catalogue.

9tfd

OLIVER HOOVER & CO.,

Mention this paper.

Snydertown, Pa.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or \$2.00 per annum, when given once a month, or \$4.00 per year if given in every issue.

Untested Queens

FOR \$1.00 FROM JULY 1ST TILL NOV. 1ST.

Names inserted in this department the first time without charge. After, 20c each insertion, or \$2.00 per year.

Those whose names appear below agree to furnish Italian queens for \$1.00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind, that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with *, use an imported queen-mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for \$1.00 before July 1st, or after Nov. 1st. If wanted sooner, or later, see rates in price list.

*A. I. Root, Medina, Ohio.

*H. H. Brown, Light Street, Col. Co., Pa. 7tfd90

*Paul L. Viallon, Bayou Goula, La. 7tfd90

*S. F. Newman, Norwalk, Huron Co., O. 7tfd90

C. C. Vaughn, Columbia, Tenn. 9tfd90

Wm. L. Ashe, Edwardsville, Mad. Co., Ill. 9tfd90

J. M. Jenkins, Wetumpka, Ala. 9tfd90

*Oliver Hoover & Co., Snydertown, Northum- 17tfd9

C. R. Mitchell, Birmingham, Jeff. Co., Ala. 9tfd89

N. A. Knapp, Rochester, Lorain Co., O. 15tfd89

D. A. McCord, Oxford, Butler Co., Ohio.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

A. I. Root, Medina, Ohio.

P. L. Viallon, Bayou Goula, Iberville Par., La 7tfd90

C. W. Costellow, Waterboro, York Co., Me. 7tfd90

R. B. Leahy, Higginsville, Laf. Co., Mo. 9tfd90

J. M. Jenkins, Wetumpka, Ala. 9tfd90

W. T. Falconer Mfg. Co., Jamestown, N. Y. 7tfd

IF YOU WANT BEES

That will just "roll" in the honey, try Moore's Strain of Italians, the result of eleven years' careful breeding. Reduced prices: Warranted queens, 80c each; 3 for \$2.00. Strong 3 L. frame nucleus, with warranted queen, \$2.50. Safe arrival and satisfaction guaranteed. Those who have never dealt with me, I refer to A. I. Root, who has purchased of me, during past ten years, 415 queens.

J. P. MOORE, Morgan, Pendleton Co., Ky. 13tfd

Money-order office, Falmouth, Ky.

Please mention this paper.

CARNIOLAN BEES.

For the highest type of these bees see our advertisement in GLEANINGS, July 1 No. 15tfd

J. B. MASON & SON, Mechanic Falls, Me.

In writing to advertisers please mention this paper.

500 Italian Queens For Sale. Tested, \$1.10, three for \$3.00. Untested, 70 cts. each; three for \$2.00. Also bee-keepers' supplies, etc. 16-page circular free. 15tfd

JNO. NEBEL & SON, High Hill, Mo.

EVERBEARING STRAWBERRY. Descriptive price list free. SETH WINQUIST, Russellville, Oregon.

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CONVENTION NOTICES.

The Southwestern Wisconsin Bee-keepers' Affiliated Association will meet Oct. 8, 1890, in Platteville, Wis., at the residence of E. France, to commence punctually at 10 A.M., sharp. There will be a large turnout of prominent bee-keepers of the State. A question-box, free to all, in which any subject you wish discussed can be presented and answered. Let every one be on hand and bring in his report for 1890 starting at spring count, or May 1. There will be blanks sent to each member for this purpose, in due time, by the secretary.

N. B.—The date of the above convention has been changed from the 1st to the 8th.

Boscobel, Wis.

BENJ. E. RICE, Sec'y.

SHIPPING-CRATES.

We are making them cheap and neat.
Write for prices.

C. B. LEWIS & CO.,
WATERTOWN, WIS.

In responding to this advertisement mention GLEANING

DADANT'S FOUNDATIO

Is kept for sale by Messrs. T. G. Newmar, Son, Chicago, Ill.; C. F. Muth, Cincinnati, O.; Jas. Heddon, Dowagiac, Mich.; O. G. Collier, Fairbury, Nebraska; G. L. Tinker, New Philadelphia, Ohio; E. S. Armstrong, Jerseyville, Ill.; E. Kretschmer, Red Oak, Iowa; P. L. Viallon, Bayou Goula, La.; Jos. Nysewander, Des Moines, Ia.; C. H. Grein, Waukesha, Wis.; G. B. Lewis & Co., Watertown, Wisconsin; J. Mattoon, Atwater, Ohio, Oliver Foster, Mt. Vernon, Iowa; C. Hertel, Freeburg, Illinois; Geo. E. Hilton, Fremont, Mich.; J. M. Clark & Co., 1517 Blake St., Denver, Colo.; Goodell & Woodworth Mfg. Co., Rock Falls, Ill.; E. L. Gould & Co., Brantford, Ont., Can.; R. H. Schmidt & Co., New London, Wis.; J. Stauffer & Sons, Nappanee, Ind.; Berlin Fruit-Box Co., Berlin Heights, O.; E. R. Newcomb, Pleasant Valley, N. Y.; L. Hansen, Davenport, Ia.; C. Theilmann, Theilmann, Minn.; G. K. Hubbard, Fort Wayne, Ind.; T. H. Strickler, Solomon City, Kan.; E. C. Eaglesfield, Berlin, Wis.; Walter S. Powder, Indianapolis, Ind., and numerous other dealers.

LANGSTROTH on the HONEY-BEE, REVISED.

The Book for Beginners, the Most Complete Text-Book on the Subject in the English Language.

Bee-veils of Imported Material, Smokers, Sections, Etc.

Circular with advice to beginners, samples of foundation, etc., free. Send your address on a postal to
4tfdb

CHAS. DADANT & SON,
HAMILTON, HANCOCK CO., ILLINOIS.

In responding to this advertisement mention GLEANINGS.

BEST ON EARTH



ELEVEN YEARS
WITHOUT A
PARALLEL AND
THE STAND-
ARD IN EVERY
CIVILIZED
COUNTRY



Bingham & Hetherington
Patent Uncapping-Knife,
Standard Size.

Bingham's Patent Smokers,

Six Sizes and Prices.

Doctor Smoker, 3 1/4 in., postpaid...	\$2.00
Conqueror " 3 " "	1.75
Large " 2 1/4 " "	1.50
Extra (wide shield) 2 " "	1.25
Plain (narrow ") 2 " "	1.00
Little Wonder, 1 1/2 " "	.65
Uncapping Knife.....	1.15

Sent promptly on receipt of price. To sell again, send for dozen and half-dozen rates.

Milledgeville, Ill., March 8, 1890.

SIRS:—Smokers received to-day, and count correctly. Am ready for orders. If others feel as I do your trade will boom. Truly, F. A. SNELL.

Vermillion, S. Dak., Feb. 17, 1890.

SIRS:—I consider your smokers the best made for any purpose. I have had 15 years' experience with 300 or 400 swarms of bees, and know whereof I speak. Very truly, R. A. MORGAN.

Sarasville, Ohio, March 12, 1890.

Done good service
BROTHER

GL

Warranted to
arrival guaranteed
than one dozen by
each. Look at my ad.
Address JAMES WOOD, No.

In responding to this advertise.

100 PURE ITALIAN QUEENS

Now Ready, and for the next 15 days will be as follows: Tested queens, \$1 each; untested, each; 3 for \$1.75; 5 or more, 50c each. All queens bred from select imported and home bred queens. Safe arrival guaranteed.

D. G. EDMISTON,
Adrian, Lenawee Co., Mich.

In responding to this advertisement mention GLEANINGS.

Bee-Keepers' Supplies.

WHY ÷ SEND ÷ LONG ÷ DISTANCES?

SEND NAME ON POSTAL CARD FOR MY
NEW PRICE LIST TO

C. P. BISH, Grove City, Mercer Co., Pennsylv'a.

Formerly of St. Joe Sta., Butler Co., Pa.
ESTABLISHED IN 1884.

Please mention this paper.

9tfdb

Wants or Exchange Department.

WANTED.—To exchange young Italian queens from imported stock, for pair of black squirrels, pair of ferrets, or thoroughbred female pug-dog. J. W. KEERAN, Bloomington, McLean Co., Ill. 17d

WANTED.—To exchange fruit-trees for currant plants; send prices. J. L. HALLENBECK, Altamont, N. Y. 17d

WANTED.—To exchange pure-bred poultry for white extracted honey. Select breed you want from my circular (sent free) and mail sample of honey. S. P. YODER, East Lewistown, O. 17tdfb.

WANTED.—To exchange new bone and meal mill, cost \$5, and ever-bearing strawberry-plants, or nursery stock, for any kind of fruits or honey, or a type-writer. J. B. ALEXANDER & Co., Box 85, Hartford City, Ind. 17d

WANTED.—Golden Queen raspberry roots in exchange for other nursery stock. M. ISBELL, 17-18d Norwich, Chenango Co., N. Y.

WANTED.—To exchange hybrid bees for extracted honey or offers. G. M. WHITFORD, 17d Arlington, Wash. Co., Neb.

WANTED.—To exchange a World type-writer, and books—Short Rules for all Business Calculations, and Driven from Sea to Sea, literary of thrilling interest, for books on bee keeping, political economy, etc., latest editions, or any thing useful. 17d T. K. MASSIE, Concord Church, Mercer Co., W. Va.

WANTED.—To exchange a Stanley 4 L. frame extractor, used only once, and a 17d extractor for a Barnes 17d

FOUR DOLLARS

Will purchase six queens reared from our

Hundred-Dollar Queen Mother.

DR. G. L. TINKER says:—"I am not surprised that you value your queen so highly, if all her queen progeny are as fine as the one you sent me." They are.

HENRY ALLEY,

Wenham, Mass.

In responding to this advertisement mention GLEANINGS.

MOORE'S STRAIN OF ITALIANS AS HONEY-GATHERERS.

MR. P. B. DICKINSON, Lowell, Ind., says:—"I do not think that you miss what you say about your bees 'rolling' in the honey. That queen beats every thing in the yard." See "ad." in another column. 17d

In responding to this advertisement mention GLEANINGS.

GOLDEN ITALIANS.

Full colonies with tested queen, in A. I. Root's Portico hives, only \$4.00. Barnes foot-power saw for hive-making, Victor scroll saw. Must be sold before Oct. 20, '90.

B. F. STOVER,

Roscoe, O.

In responding to this advertisement mention GLEANINGS.

FOR LIGHT AND DARK FERRETS,

and pure Poland-China Swine, address

N. A. KNAPP,

Rochester, Lorain Co., O.

In responding to this advertisement mention GLEANINGS.

FOR SALE.—County Store, postoffice and dwelling-house in same building; also 50 Colonies Bees. Address S. HEATH, Tidal, Armstrong Co., Pa.

FINE QUEENS CHEAP

I have more queens than I can winter, and will about 20 untested at 50 cents each. Part are Italian, and balance Italian, from Root's Honey Queen. No disease of any kind, and no black drones.

MASSIE, Concord Church, Mercer Co., W. Va.

In responding to this advertisement mention GLEANINGS.

NOW FOR A BARGAIN.

I will sell cheap my entire stock of good Italian one honey-extractor, and all my bee-fixtures; if sold soon will sell the honey also, as I wish to retire from the business. MRS. REBECCA KINNEY, 16-19lb Bloomsburg, Col. Co., Pa.

In responding to this advertisement mention GLEANINGS.

NOW is the time to set **STRAWBERRIES** for next year's fruiting. Write for full price list of plants and Secrets of Success in Growing Small Fruits; sent free, on application to I. A. WOOLL, 16tdfb Elsie, Mich.

WILL SELL APIARY OF 33 COLONIES in fine condition (good location). Also 40 acres of land one mile from lively town. Address all inquiries to BOX 98, White Cloud, Mich. 16-17-18d

Black and Hybrid Queens For Sale.

One hybrid queen and a sample of my 4-banded workers for 25 cts. E. C. EAGLESFIELD, Berlin, Wis.

Hybrid queens for sale, 25c each; 5 for \$1.00.

J. A. GREEN, Dayton, Ill.

10 black and hybrid queens at 25c each. No choice. 3 mismatched Italian queens reared from imported mother, 50c each. W. L. MALOON, West Bowdoin, Sag. Co., Maine.

20 black queens for sale at 25c each, or 5 for \$1.00. 5 or 6 hybrid (Italian-black) at 50c each; raised this year. AMOS S. ADDISON, Huntington, Putnam Co., Fla.

FOR SALE.—My apiary of 185 swarms for \$4 each. All are in good condition. MRS. C. M. BLISS, 17d Fox Lake, Dodge Co., Wis.

NEW FACTORY.

We will soon be in our new factory, which will be the largest and most complete in the world. We shall make the best of goods at lowest prices. We are ready for contracts for next season's supplies. Write us.

C. B. LEWIS & CO.,

WATERTOWN, WIS.

17-tfdb

In responding to this advertisement mention GLEANINGS.

J. C. SAYLES,

HARTFORD, WIS.,

Manufactures Apiarian Supplies of Every Description. Catalogue Free to All.

3tfid *Send Your Address.*

In responding to this advertisement mention GLEANINGS.

ITALIAN QUEENS, 50 CTS.

I will send nice young laying untested queens by return mail at the above price, and guarantee safe arrival. Send in your orders at once.

Address F. H. PETTS, Warsaw, Mo.

In responding to this advertisement mention GLEANINGS.

QUEENS and SUPPLIES.

Untested Italian queens, each.....\$1.00
Tested..... 2.00

Send for price list of bees and supplies.

Address F. W. LAMM,
(Box 106.) Somerville, Butler Co., Ohio.

Please mention this paper. 24-23db

FOR SALE.

A WELL-ESTABLISHED SUPPLY BUSINESS. Will invoice the stock with a reasonable discount, and no charge for the business. If not sold before the 16th of Sept., will auction off at that time. Have an Armstrong T-tin machine which will make 500 complete T tins in an hour. A fine working Given foundation press; Horse Power and Rodgers saw; Hives, made and flat; Sections, Extractors, etc., and 50 colonies of Italians.

Terms cash or satisfactory security. Will quote prices or receive bids by mail, on the whole, or any article.

GEO. M. TERRELL,
Jerseyville, Ill.

(Successor to E. S. Armstrong.)

FOLDING PAPER BOXES.

CRAWFORD'S SECTION CARTONS ARE THE BEST.

Send for free sample and price list, and find out the reason. A certain fact has come to our knowledge that is worth dollars to you. Send for it.

A. O. CRAWFORD, S. Weymouth, Mass.

12tfdb Please mention this paper.

THE CANADIAN

Bee Journal | *Poultry Journal*

Edited by D. A. Jones. | Edited by W. C. G. Peter.

75c. Per Year.

75c. Per Year.

These are published separately, alternate weeks, and are edited by live practical men, and contributed to by the best writers. Both Journals are interesting, and are alike valuable to the expert and amateur. Sample copies free. Both Journals one year to one address \$1. Until June 1st we will send either Journal on trial trip for 6 months for 25 cts.

The D. A. Jones Co., Ltd., Beeton, Ont.

In responding to this advertisement mention GLEANINGS.

6-1db

MUTH'S HONEY - EXTRACTOR,

SQUARE GLASS HONEY-JARS,

TIN BUCKETS, BEE-HIVES, HONEY-

SECTIONS, &c., &c.

PERFECTION COLD - BLAST SMOKERS.

Apply to CHAS. F. MUTH & SON,

Cincinnati, Ohio.

P. S.—Send 10-cent stamp for "Practical Hints to Bee-keepers." *In responding to this advertisement mention GLEANINGS.* 1tfdb

BEES

SEND for a free sample copy of the **BEE JOURNAL**—16-page Weekly at \$1 a year—the oldest, largest, and cheapest Weekly bee-paper. Address **BEE JOURNAL, Chicago, Ill.**

16tfdb

Please mention GLEANINGS.

1tfdb

SECTIONS! SECTIONS! SECTIONS!

On and after Feb. 1, 1890, we will sell our No. 1 V-groove sections, in lots of 500, as follows: Less than 2000, \$3.50 per 1000; 2000 to 5000, \$3.00 per 1000. Write for special prices on larger quantities. No. 2 sections at \$2.00 per 1000. Send for price list on hives, foundation, cases, etc.

J. STAUFFER & SONS,
Successors to B. J. Miller & Co.,
Nappanee, Ind.

16-tfdb

In responding to this advertisement mention GLEANINGS.

ERTEL'S VICTOR
SHIPPED ANYWHERE TO OPERATE
ON TINS AGAINST ALL OTHER
H.V. PRESSES

HAY PRESS
PURCHASER TO KEEP ONE
DOING MOST AND BEST WORK
FOR THE MONEY



GEO. ERTEL & CO. QUINCY, ILL.

In responding to this advertisement mention GLEANINGS.

TAKE NOTICE!

BEFORE placing your Orders for **SUPPLIES**, write for prices on One-Piece Basswood Sections, Bee-Hives, Shipping-Crates, Frames, Foundation, Smokers, etc. Address

R. H. SCHMIDT & CO.,
21-20db NEW LONDON, Waupaca Co., WIS.

In responding to this advertisement mention GLEANINGS.

HOME EMPLOYMENT.—AGENTS wanted everywhere, for the **HOME JOURNAL**—a grand family paper at \$1 a year. *Big cash premiums.* Sample FREE. **THOS. G. NEWMAN & SON,** 246 East Madison Street, CHICAGO, ILLS.

KIND WORDS FROM OUR CUSTOMERS.

The queen and bees you sent arrived in good condition, after their long journey. In my estimation they are worth twice as much as they cost.

St. Johns, Ariz., July 3.

C. P. ANDERSON.

BUCKWHEAT IN BLOOM LESS THAN 30 DAYS FROM SOWING.

The buckwheat I bought of you was sown on the 20th of June. It is now in bloom, and the bees work on it from morning until night.

Ludlerville, Md., July 19.

L. C. BENTON.

QUEEN RECEIVED AND SUCCESSFULLY INTRODUCED.

The queen was received all right and in very good order. I pinned her on the combs the 4th, and she stayed there until the 6th. I lost the cage, and she crawled down the combs all right; and on the 7th she had laid a dozen or so of eggs. The work was done according to the A B C.

Marvinville, Ark., July 7.

G. C. LEWIS.

GLEANINGS AS AN ADVERTISING MEDIUM.

I think this is the fifth or sixth time I have advertised in GLEANINGS, and I have never yet failed to get plenty of replies to my "ad." I am all sold out now—needn't insert again.

Laurenceburg, Ind., Aug. 20.

I. FERRIS PATTON.

[So it seems that GLEANINGS is not always a failure, after all. In looking up the advertisement we see that friend P. advertised to exchange canary birds for Italian bees or queens. Now, very likely among the readers of GLEANINGS there are more who have Italian bees to trade or swap than who wish to buy bees or queens.]

HONEY COLUMN.

CITY MARKETS.

ALBANY.—*Honey.*—White, selected, 1-lb., 18@20; 2-lb., 17@18; white, as runs, 1-lb., 16@17; 2-lb., 15@16; mixed, selected, 1-lb., 15@16; 2-lb., 14@15; mixed, as runs, 1-lb., 14@15; 2-lb., 13@14; dark, selected, 1-lb., 13@14; 2-lb., 12@13; dark as runs, 1-lb., 12@13; 2-lb., 12@12½. Glassed sections usually sell 1c less. Extracted, white, small pkgs., 12c; 60-lb. tins, kegs, or barrels, 8@9; mixed, or amber, small pkgs., 9; 6-lb. tins, kegs, or bbls., 7@8; dark, small pkgs., 8; 6-lb. tins, kegs, or bbls., 6@7. Receipts of honey light, also demand being early; but some attractive lots bring good prices, owing to the light receipts.
H. R. WRIGHT,
Aug. 20. Albany, N. Y.

NEW YORK.—*Honey.*—New comb honey is now arriving and finds ready sale. We quote: Fancy white, 1-lb. paper boxes, 16@18; fancy white, 1-lb., glassed or unglassed, 15@17; fancy white, 2-lbs., 14@15. Off grades, 1-lbs., 13@14; do. 2-lbs., 12@14. Extracted, basswood, 7½@8; California, 6½@7; Southern extracted, 65@70 per gallon; Southern strained, 60@65.
Aug. 25. HILDRETH BROS. & SEGELKEN,
28 & 30 West Broadway, New York.

KANSAS CITY.—*Honey.*—Receipts of honey very light at present; the demand is fair for comb. Fancy 1-lb. white-clover, 14@15c; same, 2-lb., 11@12. Dark, 1-lb. comb, 12@13; same, 2-lb., 9@11. Extracted in very little demand at present. *Beeswax*, 25@27.
Aug. 20. HAMBLIN & BEARSS,
514 Walnut St., Kansas City, Mo.

MILWAUKEE.—*Honey.*—This market now offers good encouragement to shippers of honey. The old stock of white comb is all gone, and new choice 1-lb. sections will meet with a sweet reception. Will now quote: 1-lb. white, choice, 15@16; 1-lb. white, good, 14@15; 1-lb. white, fair, 13@14; 2-lb. white, choice, 13@14. Extracted in bbls., white, choice, 7@8; in kegs and tin, choice, 8@8½; in bbls., dark, 6½@7½. *Beeswax*, 26@28, and 30.
Aug. 23. A. V. BISHOP,
Milwaukee, Wis.

BOSTON.—*Honey.*—New honey is commencing to come in, and we are selling at 18c. We are advised that the crop is short, but thought it best to start at 18c and work it up a little as the demand increases. Extracted, 7@8.

Beeswax.—Sold beeswax to-day at 30c for fancy yellow.
Aug. 15. BLAKE & RIPLEY,
Boston, Mass.

NEW YORK.—*Honey.*—Of comb honey there is neither old nor new, in this market. We have inquiries repeatedly for fancy 1-lb. new; and 14@15c could be realized probably. Common strained, Southern, 6½c per gal.; extracted, 65@75. Palmetto and mangrove, well ripened, 7@7½ per lb. California, 6½@7. *Beeswax*, scarce, 29.
Aug. 21. F. G. STROHMMEYER & Co.,
New York City.

ALBANY.—*Honey.*—We quote fancy white 1-lb. sections, 18; medium, 15@16; buckwheat, 12. Inferior grades and glassed sections, from 1@2c less than above price. We have received 22 half-bbls. of extracted honey which the consigner wishes held at 7c per pound.
Aug. 20. CHAS. McCULLOCH & Co.,
339 Broadway, Albany, N. Y.

CINCINNATI.—*Honey.*—Demand is good for all kinds of honey. All of last year's crop is sold, and new arrivals don't keep pace with the demand. We quote 14@16 for best comb honey, in the jobbing way, and 5@8 for extracted honey on arrival. *Beeswax.*—There is a good demand at 24@26, for good to choice yellow.
Aug. 26. CHAS. F. MUTH,
Cincinnati, Ohio.

NEW YORK.—*Honey.*—The comb-honey market is in fine condition—never saw it better, as the old honey is completely sold out. We quote the following: can sell at the following prices: Fancy white, 1-lb. paper caps, 16@18; fancy white, 1-lb., glassed or unglassed, 15@17; fancy white, 2-lb., glassed, 14@15; off grade, 1-lb., 13@14; off grade, 2-lb., 11@12.
Aug. 25. THURBER, WHYLAND & Co.,
New York.

KANSAS CITY.—*Honey.*—Receipts of comb honey light; demand good at 14@15 for 1-lb. white; no 2-lb. comb or dark comb in the market. Very little demand for extracted at present. We quote white, 6½@7; dark, 5@6. *Beeswax*, none in the market.
Aug. 21. CLEMONS, MASON & Co.,
Kansas City, Mo.

CLEVELAND.—*Honey.*—Very little honey coming into the market now. White-clover and basswood honey in 1-lb. sections sells readily at 15@16c.
Aug. 19. A. C. KENDEL,
Cleveland, Ohio.

ST. LOUIS.—*Honey.*—We have sold thus far of this season's crop about 18 tons, and find trade excellent. We quote: Extracted, in barrels, 5½@6; cans, 7½@8. White clover, comb, 1-lb., 13½@14½; inferior, 11@12. *Beeswax*, prime, 27½.
Aug. 20. D. G. TUTT GRO. CO.,
St. Louis, Mo.

DETROIT.—*Honey.*—New comb honey is selling at 14@15c; very little in market. Extracted, 7@8c. *Beeswax*, 26c for prime.
Aug. 21. M. H. HUNT,
Bell Branch, Mich., Aug. 21.

FOR SALE.—50,000 lbs. of extra fine sage honey in 60-lb. tin cans.
MERCER & SONS,
Ventura, Ventura Co., Cal.

FOR SALE.—400 or 500 lbs. of white-clover honey, put up in 12-lb. shipping-boxes, glass on two sides, for \$1.75 each. Three 5-gal. tin cans, two in box, of extracted white-clover honey, holding 5 gals., which I offer for \$5.00 each, put on board cars.
R. GAINES ROBERTSON,
Box 774, Marshall, Saline Co., Mo.

FOR SALE.—Fine white-clover and blue-thistle comb honey, 4½x1½ sections, with separators; full weight, and fine goods. I can pack in crates of 120 lbs. each, so as to go safe by freight. I want 17c for it here. H. W. BASS, Front Royal, Warren Co., Va.

FOR SALE.—About 500 boxes of white-clover honey, in 1-lb. boxes; price 13c on board of cars.
L. D. WORTH, Reading Center, Schuy. Co., N. Y.

FOR SALE.—2000 lbs. well-ripened extracted honey.
W. H. S. GROUT, Kennedy, Chaut. Co., N. Y.

FOR SALE.—1000 lbs. of choice extracted honey.
F. W. MOATS, Brunersburg, Ohio.

FOR SALE.—Alfalfa honey, comb and extracted, quantities to suit. Address CHAS. ADAMS,
Greely, Ohio.

FOR SALE.—2000 lbs. extracted clover honey in 10-gal on ash kegs; 120 lbs. net, at 19 cents. 2000 lbs. comb honey in 1-lb. sections.
M. ISBELL,
Norwi. h. Chenango Co., N. Y.

FOR SALE.—Forty-five 24-lb. cases of white honey, first quality, at 15c per lb. cash, on board cars.
C. & P. OLMSTEAD, East Bloomfield, Ont. Co., N. Y.

WANTED.—One or two thousand pounds of nice comb honey. Write, giving amount on hand and price wanted.
A. D. ELLINGWOOD,
171fdb Berlin Falls, N. H.

WANTED.—White comb and extracted honey; state price, package, etc.
B. WALKER, 171fdb
Capac, Mich., or Prairie du Chien, Wis.

ARE YOU GOING

—TO ATTEND THE—

MICHIGAN STATE FAIR?

If so, please call at "Bees & Honey Hall," and examine the "Golden Italian Bees," on exhibition by JACOB T. TIMPE, of Grand Ledge, Mich. For prices on Queens see Oct. 1st. GLEANINGS. Don't forget to call while at the FAIR. I shall also have other races on exhibition. Do not fail to see them.



Vol. XVIII.

SEPT. 1, 1890.

No. 17.

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SELLING SECRETS, ETC.

DR. C. C. MILLER GIVES US SOME FACTS FROM
THE STANDPOINT OF A PHYSICIAN.

Friend Root:—It is so many years since I had any thing to do with the practice of medicine that I hardly count myself one of the medical profession; but I think I can help you a little to understand why little or nothing is said by them about what you evidently consider a fit subject for ventilation—the Dr. A. Wilford Hall matter. In the first place, his case does not stand out as prominently to their minds as it does to yours. It is only one of a hundred. Indeed, in some respects it is of a better type than common; for at a guess I should say that in many cases the man who pays \$4 for the secret gets the worth of his money, or at least is not harmed by it. I have just now picked up the first religious paper that comes to my hand—and it is one of the best of its class—and looking at its advertising columns I find a medicine offered as a sure cure for consumption. I very much doubt whether any one ever was or ever will be cured of consumption by this medicine; and I suspect that it may do harm in a great many cases, where the Hall treatment will not. These things are common. You see them every day, and every day the people are paying out a good many four dollars for things worse than the Hall business. If a physician should try to expose every thing of this kind he would have his hands full; and, moreover, people would say he had an ax to grind in so doing. Good honest people are found in plenty who believe in such things, and resent any word said against them. A somewhat similar case came within my knowledge in the sphere of bee-keeping. A certain party had been doing a business of some extent, selling at \$20 a colony of bees not worth half that, and other things as bad or worse. I felt that something ought to be done to prevent people being defrauded, and I wrote some very plain words about it for an influential publica-

tion. Would you believe that the good editor, with misdirected charity, squelched the thing, saying that he thought the party was doing better—a kind of “better” that every thief uses who changes his tactics whenever it makes him safer from detection? Perhaps Dr. Hall will do better—take \$3 instead of \$4 whenever he thinks he can make more by so doing.

But there is another reason why physicians don't say any thing against Dr. Hall; and that is, they don't know any thing about his treatment. Every one who gets the secret agrees to keep it; and, however strongly I may think Dr. Hall a humbug, if I don't know positively what his treatment is I am not wise to say any thing about it. I received from him an offer of the secret, practically free, on condition of my keeping it secret, and I suppose it is his tactics to offer it in the same way to all physicians. This helps to keep their mouths shut, and some among them will act as “agents,” thus increasing his receipts.

I admire your pluck, friend Root, in attacking error; and whilst there will always be those who are anxious to be humbugged, I suspect your words may be the means of saving to some their four dollars.

C. C. MILLER.

Marengo, Ill., Aug. 16.

Friend M., very likely you are right. This makes the matter sadder still. Is it indeed true, that the people of our nation—those who are out of health, and possibly those who are at the same time overworked—are continually investing vast sums of money for something that does no good whatever, and oftentimes, as you state it, a positive harm? Why can't our experiment stations furnish some facts for the people out of health, just as they have furnished facts to the farmer who has been in the habit of paying over his hard earnings to quacks and swindlers? It seems that this matter of medi-

cine and medical treatment to the human family is as important as that of protecting our domestic animals from the errors of quackery. As an illustration of current superstition, I want to mention the following: A few days ago a very good and intelligent farmer, who is at present taking care of our cow, came to my wife for some salt and pepper. Then he wanted some turpentine. He said the cow had got the "wolf-tail," or something that sounded like it, and that the only thing to do was to split the end of her tail and put in some salt and pepper. Then some turpentine must be rubbed between her horns, and she would be all right. And poor bossy had to submit. When I heard of it I began to remonstrate. The man who drives the market-wagon, and who, by the way, has for many years *taught school* in winter, joined in, and declared that splitting the cow's tail was "orthodox" and right. He said he had a cow in that same fix, and a good farmer told what the trouble was as soon as he saw her, and the treatment cured her *right straight*. Now, the probability is that the poor cow had been overfed, and that is why she could not eat her supper. If simply let alone, she would have come out all right. The question that occurs to my mind in such matters is this: Who in the world had the wonderful *acuteness* to *discover* this remedy? Through what process of study, invention, and *reasoning*, did *any* human being arrive at the *astounding fact* that *salt* and *pepper* (nothing else will answer, mind you, and one alone would not answer—you must have both), are needed? Furthermore, the application must be made to the *end* of the cow's tail after it is split open. Then turpentine (nothing else *here* would answer, mind you) must be applied between her horns. In the present case, of course no money was wasted; but if it is really true that the laboring classes of our land are continually paying out a large part of their earnings in a blind and senseless way, and for that which does little or no good, is it not a sad thing to contemplate? By the way, Dr. Hall has occupied a large space in his periodical for August, to call myself and Dr. Kellogg names. He has, however, paid me so great a compliment in putting me side by side with so celebrated a physician and author as Dr. Kellogg; I feel well enough pleased to let the matter drop where it is. Yes, it is probable that GLEANINGS has saved whole neighborhoods from investing their money. I hear of it continually from agents who have, like Othello, found their "occupation gone" because somebody got hold of a copy of GLEANINGS, and carried it around, before the agent got in his fingers the four dollars from each family. Now, please do not gather from the above that I do not approve of Dr. Hall's treatment. I feel sure it has done and will do much good; but it is not his invention, and he has no legal nor moral right to receive money for something that does not belong to him.

A GLIMPSE OF FLORIDA IN JULY.

AN APIARY UNDER THE GRAPEVINES AND PALMETTOES.

Friend Root:—I send you by this mail a photograph of a corner in my bee-yard, taken from a window in my bee-house. My object in taking the picture was to give Prof. Cook a photo of the cabbage palmetto in full bloom, but I haven't done it. This picture was taken last Thursday, July 17, to test my plates, preparatory to taking some palmettoes when they come out in full flower, as I expected them to do in three or four days; but as the buds began to blight and drop immediately, from the effects of a severe drouth we have been having, I made this negative answer rather than to score an entire failure. The trees in this picture would have shown double their present bloom if they could have perfected the buds. I cut a sprig of bloom from a neighboring tree, however, and, setting it on the ground beside me, held its top over my head. This will give you an idea as to its size and form.

To my left you see a section of one of my beehives, covered by scuppernong grapevines. This family of grapes needs but little pruning, and grows enormously, and bears by the hundred bushels in some cases. You will notice that they are going over the palmetto-trees, shutting off the view beyond. They make almost a perfect shade for bees; and the Thomas variety is one of the sweetest grapes known. Having a rather thick skin, and growing in bunches of 4 to 12 berries only, they can never compete with the Delaware and other fine bunch grapes for table use, though many prefer the Thomas to eat out of hand. The berries are very large, often measuring $3\frac{1}{4}$ inches in circumference, on thrifty vines, and no insects or diseases trouble them, though the mocking-birds are very fond of the Flowers variety, which is enough smaller so that they can handle it.

This year, for bees, has been an abnormal one. The spring flow was very light on account of dry weather and the burning of the woods. Not a normal swarm was reported during the usual swarming season from February to the middle of May, and considerable feeding had to be done in April to prevent loss of colonies. I had many colonies that had plenty of honey in the hives to carry them through, but I fed all, as is my custom, in April, to prepare the bees for the summer flow. Probably my bees were in better shape than almost any others here when the flow commenced. I started the season with 93 colonies; worked 92 for extracted honey, and have taken 15,000 lbs. to date. I shall probably make it 8 tons by the time I get through this round of extracting. I have had 22 swarms right in the mangrove-honey flow (very unusual), and have had my bees draw out 400 frames of foundation during the past four weeks.

Friend Poppleton caught 25 colonies of black bees from the pine woods, where they had a little better spring forage, just at the beginning of the mangrove bloom, and he has taken ten barrels of 400 lbs. each from them. I think he had one swarm which absconded. The rest of the bee-keepers have been quite successful about here, and are feeling in good spirits. The quality of the honey is even finer than usual this season, as there was very little besides the mangrove crop gathered, and the weather has been very dry throughout the whole flow. My own crop has gone through my evaporator as usual, and is A No. 1 in quality.

Having never made a report of my crops for 1888 and '89, I will here state that, in 1888, with about 100 stands I took 5500 lbs.; and in 1889, with 96, spring count, 4500 lbs. Both years were



W. S. HART'S APIARY, HAWKS PARK, FLORIDA.

considered very poor, and my average was as high as was made, I believe, while some bought honey of me to feed in the fall, having failed to get enough to carry the bees through.

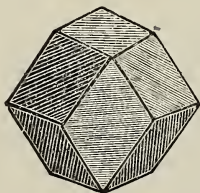
Hawks Park, Fla., July 22. W. S. HART.

Friend H., we are exceedingly obliged to you for the magnificent picture you have given us. We congratulate our artists on having copied the photograph so well. The palmettoes have always been a class of vegetation wonderfully attractive to me, both in my trip to New Orleans and the late one to California; and I assure our readers that no picture can exaggerate the beauty of vigorously growing specimens of many of the varieties. Friend H., we are very glad to know that you have made so good a report during this season, while so many have given us such discouraging accounts. If your hives are not simplicity, I should judge they come pretty near it, from their looks in the picture. What a pleasant place that must be to work! I suppose the ground under the trees and around the hives is sandy and clean, as it usually is in the home of the palmetto.

A GLASS PAPER-WEIGHT SHOWING THE MATHEMATICS OF THE HONEY-COMB.

A TRUE DODECAHEDRON.

We have finally succeeded in getting a thousand glass paper-weights, such as are described in our heading. Before we could get them, the order had to be sent to Germany to have them made, and it has taken a little over a year and a half to get them out. The adjoining cut, taken from the A B C book, shows what they are like.



A TRUE DODECAHEDRON.

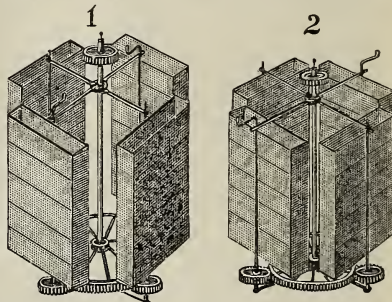
This beautiful figure has exactly 12 sides; 6 of the 12 sides are exactly on the angle of the cell of the honey-comb; and the 12 lozenge-shaped sides are exactly the shape of the figure the bees make in building perfect cells. The paper-weight is a little less than $1\frac{1}{4}$ inches through its longest diameter. It is made of beautiful crystalline glass, and is ground so that it sparkles like a huge diamond. They are the prettiest objects that can be found to grace a writing-table, or even a center-table or ornamental bracket. The usual price is 50 cts. each. By having them made to order in thousand lots, we are enabled to sell them for 20 cts.; 2 for 35 cts.; or in lots of 10 or more, 15 cts. each. If wanted by mail, the postage will be 3 cts. each, or we will furnish one as a premium to everybody who sends us a subscription to GLEANINGS from some one who has never taken it before. This beautiful figure will be of interest to bee-keepers, as it exemplifies and illustrates so clearly the problem the honey-bee solved in making this lozenge-shaped figure with its angles so mathematically exact. In

giving lectures, or even in giving a talk on this wonderful problem, this little figure illustrates the subject most beautifully. See the A B C book for full particulars.

ANOTHER REVERSIBLE EXTRACTOR.

THE REVERSING DONE AUTOMATICALLY WHEN UNDER FULL MOTION.

There is a demand among bee-keepers who run business on a large scale, for a high-grade extractor that will extract the combs on both sides without stopping to reverse the baskets. Some attempts have been made to get up such an extractor in this country, but so far they have not been a success, because they tried to reverse the baskets *against* centrifugal force. I send drawings of the inside gear of a new extractor which reverses the combs by *centrifugal* force while going at full speed.



MCINTYRE'S PROPOSED REVERSIBLE EXTRACTOR.

Fig. 1 shows the extractor ready to receive the combs full of honey. When the baskets are full you take hold of the little crank on the axle of the basket and turn it half way round, when the baskets will appear as in Fig. 2. Turning one basket turns all at the same time. A pin drops into a slot in the hub of the center-wheel, which holds all the baskets from turning out again until the first side is extracted. When ready to reverse, this pin is drawn out of the slot by means of a little rod running up in a groove in the center-axle, and terminating in a knob above the gearing. The combs, being heaviest next the top-bar, will cause the baskets to start, when they will all fly out as in Fig. 1, and extract the other side. It will not be hard to stop when all the honey is out of the combs; but a brake can be put on if thought necessary. It will have to be geared, because the radius distance is much less than in the old-style reversible, even when the baskets are out, as in Fig. 1. It will require a can about the same size as the Stanley extractor. The large wheel in the center is 11 inches in diameter, and the wheels on the axles of the baskets are 4 inches in diameter. The baskets should be $1\frac{3}{4} \times 10 \times 17\frac{1}{2}$ inside for the L. frame.

The readers of GLEANINGS will understand that this extractor has never been manufactured. The figures are drawn from imagination; scale, $\frac{1}{16}$ for the L. frame. I am not in the supply business, and never expect to be. If any one should manufacture them, and find them a good thing, a complimentary extractor will pay the inventor for the idea. J. F. MCINTYRE.

Fillmore, Cal., July 1.

The idea, friend M., is quite ingenious. Of course, it remains to be seen whether it will work as well in practice as it does on paper. Yes, there is a demand for an extractor for large honey-producers.

AN INTERESTING LETTER FROM THE OLD WORLD.

TEMPER OF THE EGYPTIAN AND OTHER ORIENTAL BEES.

Mr. Root.—In GLEANINGS for May 15, you say you are surprised that I say nothing about the vindictiveness of the Egyptian bee. I think most bee-keepers will agree with me in what I am going to say. In the first place, the bees I saw in Egypt, and some in very considerable apiaries, were very quiet, not to say docile, though we did not handle them; all we did was to walk in front of the hives and look in at a hive. They showed no more disposition to sting than our Palestines. I fully agree that our Oriental bees—Cyprians, Syrians, Palestines, and Egyptians, are more difficult to handle, especially for the beginner, but they *can* be handled after all; and when we remember it is not more than ten years since these races have been imported largely (except the Egyptians) there has hardly been time enough to weed out the most vindictive, and strike just the good qualities required—docile, prolific, large, yellow-tailed. Mr. F. Benton and myself laughed one day at a man desiring all such qualities. It is rare to find all these combined. I know some one will say, "Why did you not do it?" Because, in the first place, Benton was the only man I know of who worked to any extent in the raising of Oriental queens; and although he may have weeded out the worst, he never stayed long enough in one place to find out all the desired qualities; and then, again, a nucleus may be handled without smoke and veil; but as soon as this same nucleus has grown to be a full-sized colony, things take another turn, and the bees seem very angry and almost impossible to handle, if all necessary precautions are not taken. A full-sized colony is never to be handled without smoke, though you can a nucleus. A few puffs from the smoker will perfectly subdue the same colony at one season of the year; while in another, a good Bingham is necessary to blow almost continually while manipulating.

It is only four months since I saw the first Bingham smoker, which I received from the Home of the Honey-bees; and it is only half the work to subdue our bees during the orange-blossom honey-flow, when with us the bees are wildest. We could not work them at all without veils while extracting, and it was very difficult to do so even then without gloves during the orange-blossom season; but we do it, and extract orange honey and feel well protected all the while.

MOVING BEES WITH CAMELS.

In May and June we moved our apiaries to the land of the Philistines, in the tribe of Dan. Owing to the scarcity of thyme in one place, I divided my apiary, consisting of 100 hives, into three. They are about $1\frac{1}{2}$ miles apart, very near the village of Ekron. You know the camels kneel down, and the hives are put on their backs without a stir from the camel, and then the clay hives, or those made of mud, as in Egypt, are exceedingly strong, and would bear any thing. The only danger is the bees getting out. We also move all our bees on camelback, and I suppose we have just as much or even more trouble than you have with horses and wagons. When it is time to move we put a spacing rack in the bottom of the hive, and two in the center, made so as to hold the frames below as well as the frames of the super. There are 13 frames in each hive and in each super. Then the super is put on and fixed on both sides by clasps, the clasp being screwed on the super, and a hold for the clasp is screwed on the hive.

A quilt is now put on, and the cover screwed on. The hive has ventilating holes covered inside by wire screen. In years gone by we moved to the mountains, and it generally took us two or sometimes three nights to arrive at our destination. Only two nights the camels had to go faster, and we traveled an hour or so by daylight, which plan we left altogether, on account of some terrible adventures we had to undergo.

One evening in the last decade of June, on Thursday, we started from Jaffa with 13 camel loads of bees (104 hives). The hives were all supposed to be well arranged; and with a good supply of all necessary implements we followed on horse and on donkey. We lost a good deal of time loading. The night was far advanced; and with the slow movements of the camels, morning came before we had got far enough, so we decided to continue by daylight. I shudder when I think of it. Somehow or other one hive got loose, and every one had to flee for his life. The camels got wild; some threw off their loads; the hives were tumbling about; my friend and myself were running about with open knives, cutting ropes, and helping the poor animals away. When all the animals were galloping away in the distance, together with their drivers, we had to look out to ourselves and hives. We were stunned with stings, being unprotected. Our veils, gloves, smokers, etc., availed us very little, for not only had all the hives to be lifted up from the ground, but a good many were cracked, and bees were furiously streaming out; but we had also to open the hives; for in the boiling sun, surely they would have been suffocated by night. It was not before four o'clock in the afternoon when the bees had forgotten about the terrible events of the morning, and we had rested, and again neared the hives with "fear and trembling." We repaired all the damages, and started again to loading camels, the stung camels being very fidgety. After a good deal of tying, screaming, howling, and what noises imagination alone can conceive, we again drove fast in the direction of Jerusalem. We arrived in this town at daybreak; but we had to go beyond Bethlehem, four miles distant. We decided to go, not having had enough of our lesson the day before. It was Whitsunday morning, and we had hoped to arrive early enough to take our rest. We hurried on. The camels were walking behind each other, when we had just passed the convent of Elijah the Prophet, a place held in great veneration by Christians and Moslems. In the rock is the place where the great prophet slept when he fled from Ahab, king of Israel; for from the holiness of his body tradition made him sink into the rock, as though it would have been a bed of down. No Christian passes but makes the sign of the cross, and stoops down to kiss the hallowed place. The road is now closed in by high stone walls, to prevent animals or people getting into the olive-yards belonging to the convent. The last of the camels got frightened and leaped toward its fore-camel, and a hive got loose. The bees streamed out furiously, and attacked the camel, then the one before it; but the other eleven could flee together with their burdens. I slipped on a veil, handed the donkey to my brother, and with open knife I ran for the camels' lives. The ropes tying the hives were cut; they fell off, and only 16 hives were now thrown on the ground. My brother put the animals hardly 200 paces away, and came running to help me. The camel got countless stings and galloped off. When we had set up the hives we just climbed the walls, jumped into the olive-yards; and, folding all our clothes faster, we had to remove the bees from the main road. The Christian

inhabitants of Bethlehem and Betjala were going in numbers to Jerusalem, while French pilgrims were on their way to Bethlehem. Our animals now got loose and galloped toward the bees. The horse galloped past; but Grey, finding the upright hives a good opportunity to rub off the bees, roused the interior bees more and more. I jumped back and tried with all my might to send him away. Beating and pushing availed nothing. He was now literally covered with bees; and although only five minutes had elapsed, he could hardly move on. We now got him far enough to put him near the stung camels, and had now to carry the hives over the walls to clear the road. They weigh between 70 and 80 lbs. per hive. We managed to clear the road, but the bees were still more furious; and with veil and thick leathern gloves on we stopped the passers-by, one at either end of the lane. Some protested, some asked why, and many, in fact, were frightened by our strange looks. The most of them could not understand the trouble. We had to call out in all languages at the top of our voices, "Bees! danger! destruction! get away!" and gesticulating meanwhile to indicate what we meant. They had to turn round the olive-yard, taking considerably more time. One Turk could not understand the trouble; and although I could find a few Turkish words, he insisted on its being the Sultan's road, and I had no right to interfere. But the bees interfered with him, and he understood that language better, for he turned round and fled.

It was late in the afternoon. The bees had quieted down so that we allowed first one and then all to pass. I was expecting some government notice, but it passed unnoticed. We arrived at our destination. The donkey died two hours after he got stung. The first camel died a fortnight after. I could not bear to hear anybody shouting, and for many weeks I started up from sleep by imaginary sounds, as knives, camels, bees, and such implements as we had to protect ourselves. It was very ruinous, those dreadful adventures. It decimated the bees, unnerved us, and several animals were killed. Happily we found good pasturage in this vicinity, and it is here I now move to every year. It takes the camels only one night. At daybreak they put down their loads; the hives are put in rows, and the bees not yet roused, so the hives are opened, and all goes on peacefully, of course. In the evening, while loading, the bees now and then got out by some crack, or badly fitting super. It was then quickly unloaded and rearranged. Stinging is, of course, a secondary matter, for both man and beast get their share; but these disagreements will have to be overcome as long as we have hives and supers; and there comes in a question. I hope some of our bee-keepers will tell us their opinion: Will a hive give the same amount of honey if the 26 combs are on a level instead of being on halves above each other? or if a frame is made bigger, so as to give 15 frames the same amount of square inches in comb.

PH. J. BALDENSPERGER.

Jaffa, Syria, July 24.

Friend B., I believe you have had more experience, or at least more disastrous experience, in moving bees, than any one else among us. If any reader of GLEANINGS has ever had any thing to match this, let him stand up and speak. Having a row with bees and horses in your own country, where you can use your own language, is surely bad enough; but among a traveling people, who speak all languages, who can imagine your worry and trouble? I think,

if I had been you, I should have declared, with considerable vehemence, that I never wanted to transport bees any more. I can not help pitying the poor camels. I suppose you do not have any humane society around there to arrest you for cruelty. By the way, how much is a camel worth, say compared with our horses? Friend B., I know exactly how you were unstrung about the time you dreamed of the *melee* as soon as you went to sleep. Our new east and west railroad has just been invading my market-garden grounds. They go entirely through it the longest way; and the cut they make is from 6 to 12 feet deep. I made friends with the bosses at the outset; but the teamsters, a great part of them, are a reckless, blasphemous lot. I tried a little to stem their torrents of profanity; but when the boss got mad and swore too, it was pretty up-hill work. Finally when a dozen teams with drivers and helpers invaded our grounds, and threatened to spread their poor clay soil from the deep cut all over my enriched land, I fought for my property and my gardens. Of course, I had plenty of helpers, and our own teams kept just before them moving the rich surface soil out of their way. But when night came I was not only thoroughly tired, but I caught cold by being out in the rain without any coat. I woke up in the middle of the night, with a headache; and as soon as I tried to sleep, the curses of the teamsters, the rattling of the scrapers, and the general clamor, followed me in my dreams until there seemed no peace, either awake or asleep. I opened my eyes wide and tried to consider the matter with reason; and when that did not stop the noises I tried to drown them in sleep. Then I began to think how thankful I should be if I were once again just free from that racking pain in my head. And I began wondering if I had not forgotten, in the many long years, of the blessing of *health*, and the ability to sleep *sound* every night. I did finally thank God then and there, and in a little time peace stole over my troubled senses. In the morning I awoke, refreshed and free from pain, and nothing remained but the memory of a couple of hours' misery in the middle of the night. Your mention of starting in your sleep reminded me of it.

AN A B C SCHOLAR'S EXPERIENCE.

A LADY WHO HAS HAD SUCCESS WITH BEES.

I sent to you for two Simplicity hives about two years ago. I have had six more made, and now have them filled with bees. I had three swarms last month. There is little or no white clover here, but lots of willow, plum, grapes, and basswood, in the ravines close by. Then the prairies are full of different varieties of goldenrod, besides the immense plots of corn and pumpkin blossoms grown by the farmers; also the buckwheat. There are only two people besides myself who keep bees here. One is a farmer about two miles out. He has only box hives, and his bees swarm a great deal, but he

gets no surplus. He turns a small box over the hives for the surplus, and has a small hole through the top of the hive for the bees to pass to it, but the temperature there is so low that the bees do not even go into it to rest. He had three large swarms come out nearly all at once, and they all clustered together. After hanging about half an hour they took French leave, and went into a hollow scrub oak in the ravine near his house. He told my husband, about two weeks after they had swarmed, that he might have them for \$1.00, as he did not know how to get them out. So we went at once, and my husband cut down the tree and split open the trunk, which was about a foot in diameter, and ten feet long, and all hollow. They had about 15 lbs. of lovely honey. I took out some of the comb, and all the brood; and having a Simplicity hive at hand we fastened all in, took it home, put a 30-lb. surplus box on top (without any bottom to it), putting starters of foundation in top, and in about three weeks it was filled with white basswood honey. I took it off and put another on, which they again filled. So you see our dollar was well invested.

I winter my bees in the basement of our barn. We had one end partitioned off for them, where it is dark and quiet. The temperature is apparently about right for them. I put chaff cushions on top. I sold a colony this spring for just what I paid for them—\$6.00.

Clark's smoker works all right, but I seldom use smoke in opening hives at this time of the honey season, for the bees pay no attention to me. It does not take to exceed ten minutes to move the frames from one hive to another, for I keep my hives perpendicular, and the combs very seldom require any attention in straightening.

I do think that bee culture is a delightful occupation for any one. It is not too laborious for a lady; besides it is such a pleasing study, and the returns are very large in comparison to the outlay.

I began with two colonies two years ago. They were in old boxes when I got them, so I just let them swarm (got 3 swarms), and sold the old colonies for what I gave for them. So you see I am considerably ahead.

Mrs. A. C. MONAGHAN.

Gary, South Dakota, July 1.

CLEANSING FOUL-BROODY HIVES, ETC.

FRIEND DOOLITTLE TELLS HIS OPINION AND EXPERIENCE.

A correspondent writes: "I have had foul brood in my apiary, and, as far as I know, I have eradicated it by the plan given by the late M. Quirby, which is similar to that recommended by D. A. Jones, of Canada. The bees were all placed in new hives, and now I want to know what to do with the old ones, so that I can use them again another year, for I do not feel able to lose them."

In replying, I beg leave to answer this question through GLEANINGS, as such answer may be of use to some of the readers besides the correspondent. The plan I used on the most of my hives, when I had foul brood during the seventies, was to scald the hive by plunging it all over in boiling water, in a large kettle which was used on the farm for cooking food for the hogs, heating water for butchering, etc. The hives were put in first and scalded, and afterward the frames of combs, thus scalding the frames and making the combs into wax at the same time; for as I made all of my frames by hand then, I thought I must save them. However, in these days of machinery I do not think

that it would pay to bother with the frames, for this scalding process makes them untrue and in poor shape for use again, so that new frames are much the cheaper in the long run. Later on, a bee-keeper living several miles away called me to his apiary to see if he had foul brood. I found it in several of his hives, and told him how to treat it. After he had cured it he scalded the hives by pouring water from a boiling tea-kettle on to the inside of the infected hives, and no foul brood was the result afterward. If you are sure that the hot water hits every nook and corner of the hive, I do not know why this plan would not answer where nothing holding boiling water is at hand large enough to put the whole hive in. The first would be the safest, however. Some claim that the hives do not need scalding or doing any thing else with them, if they are allowed to stand outdoors exposed to the weather through one winter. They say they believe that the freezing and thawing of one winter is amply sufficient to destroy all the spores or germs of foul brood about any hive. I should be inclined to go slow on this, trying only one or two till I had proved for myself that there was no danger from such hives.

While I am on this subject of foul brood I wish to especially emphasize what has been lately said in our bee-papers against sending samples of supposed foul brood to different bee-keepers for their judgment in the matter. Only lately I received such a sample, which might have worked me untold injury, if not some one else near the postoffice. Being very busy that day I did not go for my mail till late at night; and as a friend brought out the mail for me it was placed in the buggy without much thought, save to take it home. I came near leaving the mail in the barn with the buggy, but finally thought to take it to the house. In taking it out in the dark, I felt a package in a dilapidated condition; but not wishing to strike a light it was left on the table till morning. Imagine my feelings when I found, the next morning, a package of torn and soiled paper, saturated through in places with thin honey and mashed brood, giving off a scent while being undone which told me at once what it was. I was not long in consigning it to the fire and thoroughly washing every place where it had touched. As it was a time of scarcity, if I had left it in the barn, as I came near doing, in all probability the bees would have found it before I went out to feed the horse, as I do not feed him early, feeding but twice a day. Then the postoffice window is near where the mail is distributed, where again a neighbor's bees, who lives in the village, were exposed to this same contagion. Now, friends, whoever reads this, don't do such a thing as to send foul brood in the mails as samples, for by doing so you are liable to expose your brother to the same ills which you are so anxious to be rid of yourself. The books of the present day are sufficiently explicit in describing this disease, so you should be able to tell it yourselves without a reasonable doubt, with this additional test: Whenever you find something which you think is wrong about the brood in any hive in your yard, the first thing you are to do is to close that hive as quickly as possible, so that there will be no chance for other bees to get at the honey, and go and wash your hands and all else which you have used about the hive. This examination will tell you whether the bees are strong enough to repel robbers; and if so, the entrance should be contracted so you are sure no robbing can occur. Now leave the hive entirely alone till near night some day, about ten days from that time; and after the other bees are done flying, open it and examine it closely, washing your hands, etc., as before.

If you still think there is a chance of its being foul brood, leave the hive closed again for two or three weeks, providing it has plenty of bees to resist robbers, when you are to examine it again.

Now bear in mind that genuine foul brood is *aggressive*, and never *retrograding*, so that, if you find more of it than you did at first and second, together with the symptoms the books describe, that colony should be burned up at once, and gotten out of the way, before any of the rest have a chance to carry off any of the honey. If, on the contrary, it does not perceptibly progress, or there is not as much as before, keep watch of it till you are assured there is no harm in it. In no case change combs with any other hive, or expose any of this honey till you are sure it is not foul brood. Unless at least one-fourth of the apiary had foul brood, I should not attempt to cure it save by burning all up, for I do not think it would pay any one to run the risk he would have to in trying to cure the disease for less than that number.

G. M. DOOLITTLE.

Borodino, N. Y., Aug. 18, 1890.

In Ernest's absence I should say that we heartily concur with all that has been said in the above. The principal difficulty in curing the disease is that the average bee-keeper has no comprehension of the care and nicety required to avoid spreading the contagion.

QUEEN-EXCLUDING ZINC.

ITS USE IN FINDING QUEENS AND PREVENTING SWARMS.

Since the invention of the queen-excluding board, many new and useful ideas have presented themselves, and many more will in time come into use. I conceived the other day that it might be made useful in finding the queen, and made a box the size of the hive, $1\frac{1}{2}$ inches deep, with bottom, but one end out. I nailed on top a piece of zinc. We now have a box $1\frac{1}{2}$ inches deep, of the size of the hive, with one end out. To use, set it in front of a hive with the open end near the entrance of the hive in which we are to find the queen; lift the combs carefully, and shake into an empty hive without top or bottom, which is placed on the excluder-box, and you will smile to see the workers slip through, and, attracted by the noise in the hive, march in; and you will smile again to see the queen examining the different holes to see which is the largest. Why, all you need to do is to shake down the bees and help yourself to the queen. Another plan works equally well; that is, to place between two hives a piece of zinc board, and shake the bees in the upper hive as before.

For non-swarmer extracting, when the hive is full of brood, and honey begins to come, place a set of empty combs or foundation below with the queen, the brood above, and the zinc board between, and they will roll in the honey if it is to be had, and will fill the upper story as the brood hatches, and the outside combs below. By extracting and changing every two or three weeks as above, we need not fear swarming, and we can rear queens above very nicely without cost. I have a number hatched out in the upper story, with their entrance in the opposite direction to the hive below. With this plan I believe we can queen and increase or not, as we desire, and have no swarming.

Oswego, N. Y., June 13. F. H. CYRENIUS.

Both of the uses of zinc (viz., in finding queens and preventing swarms) have been before sug-

gested, but that does not alter their usefulness. With black colonies the zinc method can be used to pretty good advantage at times. In Italian or Carniolan stocks it would not pay to bother with the zinc, as the queens can usually be found on the second or third frames removed.

WALKING-STICKS, ETC.

PROF. COOK TELLS US MORE ABOUT BUGS AND INSECTS.

The insect sent by James Crafton, Canada, is the common walking-stick, *Diaperomera Femorata*. At Mr. C.'s request I send a description for GLEANINGS. This insect is well named, as it looks like an animated stick, with stick-like legs attached. It never has wings. When young it is green, and rests upon the green leaves on which it feeds. When older it assumes a more sober, gray, or bark-colored hue. Now it rests on the twigs which it so strongly mimics both in form and color that it is very difficult of discovery. This specter-like insect feeds on vegetation, but is rarely common enough to do any appreciable mischief. Sometimes they are so common in forests that the falling of their eggs, which are let drop, are said to resemble, as they strike upon the leaves, the falling of raindrops. These insects, like the crickets and locusts, to which they are related, are possessed of jaws. They are entirely harmless, and may be handled with no fear of harm.

THE LUNA MOTH.

S. C. Gordon, Georgetown, Ohio, writes: "I have no 'snaix' to send you, but I send by to-day's mail a couple of moths and some of their eggs. Please, if your busy life will permit, give history and description in GLEANINGS."

These beautiful, green, long-tailed moths are the luna moths, *Actias luna*. They are our handsomest silk-moths. The larva is a fine green caterpillar, with hairy tubercles, and oblique yellow bands. It feeds on walnut, hickory, maple, etc. Although each moth lays scores of eggs, yet so few escape their bird and insect enemies that they do no perceptible harm to our finest shade-trees. The cocoon is rounded, and much like the cocoon of our oak silk-moth. The moths are of a very delicate green hue, and each hind wing has a long tail-like projection. I think these are by all odds our finest silk-moths. It is difficult to conceive of an insect more beautiful, either in color or form.

THE COMMON CICADA, AGAIN.

Mr. M. J. Langford, Highland, Minn., and H. C. Grover, Loyd, Wis., each sends the common cicada (*C. Tibicen*), the same that I described for GLEANINGS yesterday. These cicadae are very common this year. I took my class a few days since to Grand Ledge, a deep cut through the rocks on Grand River. We found these cicadae very noisy and common at that place.

BUMBLE-BEES IN DISGRACE.

The black nude insects received, one from R. E. Ashcroft, Brookside, Mich., and the other from M. J. Langford, Highland, Minn., are bumble-bees that have got into the bee-hives, probably while the hives were open; and the bees, in dragging them from the hives, have pulled all the hairs out of them. I have often seen just such cases in our own apiary. Often the bees in their rage will not only strip the poor bombus of its hair, but of its legs and wings as well.

The long black handsome beetle, with paral-

lel sides and impressed punctured lines on its wing-covers, sent by J. E. Dart, Connesauga, Ga., is *Passalus Cornutus*. The last name is given because of the horn on the center of the head of the male. This beetle is common in Michigan, and extends to the Gulf. The grubs live in and feed on rotten wood. This insect is closely related to the common stag-beetle, or "pinch-bug," and has similar habits. I comply with Mr. D.'s request and answer in GLEANINGS.

A. J. Cook.

Agricultural College, Mich., Aug. 15.

RAMBLE NO. 27.

NIAGARA FALLS AND STEUBEN CO.

Our continued journey led us through Charlotte, on Lake Ontario, a famous summer resort for the Rochester and Western New York people. Our westward career was to end in Rochester; but being so near Niagara Falls, and thinking we should never again have the opportunity of seeing them, we resolved to spend a day there, and were providentially favored with a beautiful sunny day, and rambled and photoed to our heart's content, making some fine shots, with which we can revisit Niagara while cosily seated in our study. Our stroll across the bridge, with camera in hand, was interrupted on the Canada side with the question, "What is that ere camera thing you have in your hand?"

"Yes, sir," said we, "this is a camera thing. Any objections to my taking views?"

"Not the least, sir, if you are going to return soon; but if you are going on you must pay duty."

I gave him my proposed route to Horseshoe Falls, then down to the railroad Suspension Bridge, and back to the American side. He looked us critically in the face, and as much as said, "I know you are an honest man;" then audibly, "You can pass, sir."

We felt very happy, and smiled so benignly on the next hackman we met that he offered to carry us for 10 cents. We had been mad all day at hack-drivers on the American side for trying to prevent us from earning three dollars with our good walking apparatus. We had made up our mind, however, to keep out of hacks, and did so to the end of the day.

About as restful an experience as we had at Niagara was riding uphill backward on the inclined railroad. We felt so well over it that we were on the point of walking clear down the long stairs to ride up again; but a quarter for a ride was too much for us, and we gave it up. Our honest looks let us across the other bridge without an episode, and late in the evening we were landed in Rochester. We have no regrets for our Niagara visit. It is a work of nature that grows upon a person as he contemplates it in all its magnificent proportions.

After brief stops in Lockport and Rochester we were safely transported into Steuben Co., and dropped down at a little deserted way station near Bath, where silence and the darkness of a moonless and cloudy night were our sole companions. We felt somewhat discouraged; but when we made a dive for somewhere, and ran into a barbed-wire fence, we felt most wretched, especially where we ran against the fence. We collected ourself together, so to speak, and after meditating around in the mud and against various kinds of fences for an hour, we at last found the house we were seeking—the poorhouse. We were saluted with a husky, spasmodic bark of an overfed dog, who said, "Tramp! tramp!" just as plain as talk. Tramps of all sizes, and variegated colors, and

conditions, call nightly upon this institution; and as the dog could not see our honesty he was perhaps excusable for calling us "tramp, tramp." We turned our camera up endwise and sat down on it to rest and consider. The governor of the institution, however, put in an appearance, and learning that the Rambler was the benighted traveler we were happily entertained, and all owing to the fact that the keeper's wife was the Rambler's cousin; and we found a home here, off and on, for nearly two weeks.

Bath is conceded to be one of the pleasant villages of Western New York. It is characterized by broad shady streets and many beautiful residences. The town is chiefly noted from the institutions established here, among which may be mentioned the Davenport Orphan Asylum and the New York State Soldiers' Home, the latter accommodating in its many fine buildings about 1200 old veterans, and the beauty of the grounds and cleanliness of the buildings, and abundance and quality of the rations supplied, it is a home indeed. Bee-keeping is not a very extensive industry in and around Bath. Mr. J. H. Hadsell has an apiary in the suburbs of the village, where he attends to bee-keeping and fruit culture. His small farm is almost entirely devoted to small fruits. He uses the old-time Kidder hive, which in external appearance is much like the Dual hive recently adver-

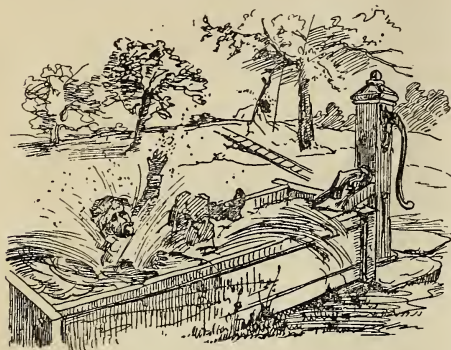


J. H. HADSELL'S APIARY.

tised in GLEANINGS. He uses the hive both single and double walled, and winters on the summer stands. Mr. H. uses an old-style $1\frac{1}{2}$ -lb. section in pairs, which must be sawn apart before putting upon the market. Comb honey was selling at 10 and 12 cents per pound. Mr. H. was very pronounced in his opinions about small bee-keepers who allowed grocers to set the price upon their products. He could sell extracted honey at as good prices as comb honey, and proposed to raise more of it in the future. He said sulphured honey was liable to produce colic, and cited several instances to prove his position. As a substitute for fuming, he prevented miller-worms by keeping comb honey in a cool dry room, in a temperature not above 60°. Mr. H. invented and patented a honey-strainer several years ago, but the sales did not amount to much, and he evidently looked upon it as a past folly, and did not wish to say much about it. Thus, how often our pet schemes of one period become a thorn in the flesh later on! There were other bee-keepers in the vicinity of Bath, but mud and rain prevented the extension of our acquaintance in that line. Mr. Henry Peacock, a helper at the county house, should not be passed, for his apicultural experience was brief but thrilling. A few swarms of bees were under his management; every thing went well until one day, while hiving a swarm, an old dead apple-tree limb caught the hat and

veil from his head, "and," said he, "it seemed as though half the swarm made a dive for my head."

"I suppose you rushed for the nearest bush-es, or the cellar, to get rid of them."



"HEN" PEACOCK IN THE WATERING-TROUGH.

"No, I didn't. I went for the nearest thing, and that was the watering-trough, and plunged in all over."

"Ha, ha! that was splendid. Did it get the bees off?"

"Oh, yes! it cooled them off, and me too. I soon crawled out and ran for the barn, where I combed a few out of my hair. I have never managed bees since, and want nothing to do with them."

"Lucky Peacock!" thought

THE RAMBLER.

VERTICAL VS. HORIZONTAL BEE-ESCAPES.

THE DIBBERN ESCAPE A FAILURE WHERE THE OLD-STYLE REESE SUCCEEDS.

Since reading friend Doolittle's unfavorable opinion of the utility of bee-escapes in GLEANINGS for Aug. 1, I feel it a duty to give my experience. After a fair trial I found the horizontal has been a failure; while the vertical cone, as I use it, is all that I can desire. Without its aid I could not have managed my bees without assistance. I am a practicing physician, and it so happened this summer, that, just as white clover opened (our only source of surplus), an epidemic of measles and dysentery visited us, keeping me on the road almost continuously during flow. Only a few of my queens being clipped, most of my swarms went to the woods. But, to my subject, bee-escapes:

Having given Dibbern's horizontal repeated trials with failure, and being compelled to have some aid along that line, I at once made several vertical (after Reese's plan). With these I find two things necessary for perfect work: First, there must be an air-space between the escape-board and brood-nest. Second, the opening at the apex of the cone must be of good caliber, not less than $\frac{3}{8}$ of an inch.

Take a board the size of your section-case, and in its center insert a wire cone having a $2\frac{1}{2}$ -inch base, 3 inches deep, with an opening for exit at the apex not less than $\frac{3}{8}$ of an inch. Tack the board on an empty case, and you are equipped for business. Now, just before sunset go to your hive having sections ready to come off. Don't take a smoker with you; lift off gently the full super, bees and all. Set the escape in its place on the honey-board, or, in its absence, on the brood-frames. Set the full super on the escape, then put on the cover. Very early next morning, take off your case and

take it to the honey-room. Now remove the escape, and with a gentle puff or two of smoke drive the bees below the honey-board. Put on your case of empty sections, and the work is done, and with no loss of time to the bees, and comparatively none to you. I would say to friend Doolittle, that there will be no young bees remaining behind to be lost. In taking off over 500 lbs. by this method I do not think the average was half a dozen bees to the case, sometimes only one or two of what my wife fondly styles "baby bees." I am possibly over-sanguine, but I really believe that, in the near future, even now, the procuring of comb honey will be attended with less trouble and expense than extracted.

WM. S. ADAMS.

Guys, Md., Aug. 18.

BEE-ESCAPES A SUCCESS.

I have been looking for some time in the different bee-journals for some reports of the horizontal bee-escape; but as yet not much has appeared; and I am a little surprised to learn that some have met with failure. I became much interested in them last winter, when so much was going the rounds in the bee-journals, and looked forward with much interest to the time when I could test them. I thought if they would work as represented they would be a great help in taking our surplus honey. I sent 50 cts. to Mr. Dibbern, and procured a sample of his horizontal escape. It was very nicely made, and looked as though it would do all that was claimed for it. But I did not like the exits being on a level with the tin, to which it was soldered; and I could not see but that a single cone would work just as well as a double one. I made five or six after my own plan, with single cones, the cones projecting away from the tin, with the intention of testing all of them when the time came. Now for the result:

In the morning, while it was yet cool, I took my smoker and escapes, and went into the beeyard. I went to a hive on which was one or more cases filled, or partially filled, with honey, which I wished to take off. I removed the top case, and placed the escape on top of the other, or on the top of the hive, as the case might be. I then replaced the case of honey on top of the escape. I proceeded in this way till my supply of escapes was all gone; and then in the afternoon, or late in the evening, I went around to each hive on which an escape had been placed, and took off the cases of honey, and carried them to the honey-house, a great many of them without a single bee in, and some with a few bees in, with the exception of three or four cases. These I left on for two or three days, and then took them off with a good many bees in. I can not tell why the bees did not go out of them, unless they were mostly young ones. I had the Dibbern escape in use all the time with the ones I made myself. The Dibbern escape did not seem to clear up a case of bees as soon nor as clean as my own make. The bees seemed to find their way back in. On one occasion, when I had taken the Dibbern escape off a hive, a considerable number of bees were on the underside of the escape. I held it in my hand a few minutes to see if any of the bees would find their way back through the escape, and in that short time four or five bees found their way back through the escape. The exits being on a level with the tin, and the exits of both the cones being directly opposite each other, and so near each other, if a bee finds its way in through the first cone it passes on directly through the other cone and back into the super. In my escape the exit is away about a bee-space from the tin; consequently it is not so easily found by the bees.

Perhaps I should say just here, that I made

another escape that worked very well. It is simply a frame the size of the top of the hive, and about $1\frac{1}{4}$ inches high, with two or three cones made of common wire cloth tacked over so many three-fourths-inch holes in one end of the frame. The cones were made about $1\frac{1}{2}$ inches long. These escapes were put on the same as the others, with the cones turned to the front of the hive. In about half an hour the bees could be seen rolling out of the cones as fast as they could get out, and down over the front of the hive, into the entrance below. The only objection to this kind of escape, that I could see, was, robbers might find their way in, but I think not to amount to anything, and they are not so easily taken care of, as the cones are in the way, and are in danger of being mashed.

I regard the bee-escape as one of the best inventions of the day. What the improvements will be in the future, remains to be seen.

Millsboro, Pa., Aug. 14. OSMAN MCCARTY.

FURTHER TESTIMONY.

In response to the editor's call for experience with bee-escapes in getting bees out of supers, I am able to report that the new Dibbern horizontal bee-escape is a success. The escapes are to be adjusted under the supers, and left on over night. In the morning the supers will be found nearly or quite rid of bees. In one case, three stories of my hive full of honey and bees were cleared in one night, so that there were only a dozen or two bees remaining. There seemed to be no disturbance to the colony, and work was resumed as if nothing had happened.

The supers are, however, not so quickly or so completely emptied, as a rule, when the escape rests only $\frac{3}{4}$ of an inch above the frames as where a rim one or two inches deep intervenes between the escape and the hive. With the shallow rim beneath the escape, the supers will generally be found cleared of every bee the next morning. The rims I used were 2 inches deep, and have various other uses in the apiary, as in the introducing of queens, in shipping, etc.

It is somewhat remarkable that the bees do not bite into the cappings of the honey by the new mode of clearing supers. This fact alone is worth considerable to the bee-keeper, as by no other method except one can the bees be prevented from mutilating the cappings. Every one of the plans recommended by friend Doolittle, on page 555, are open to this objection, and are regarded as impracticable to bee-keepers in general where the honey is to be taken expeditiously and in good order.

There is but one plan I know of to get bees out of supers with smoke successfully, and it is as follows: Make a frame 4 inches deep for a stand, and wide enough so as to stand the supers up endwise. Nail at each corner a leg one foot long. Place this stand near the front of the hive. Now light a good smoker, lift the cover of the super off, and smoke the bees down. Hand the smoker to an assistant, and lift off the super and place on the stand. While the assistant works the smoker, vigorously throwing the smoke through the sections, the apiarist takes a hand brush-broom, and by quick movements brushes off the bees in front of the hive as fast as they come out of the super. In less than two minutes every bee can be driven out. The assistant then carries the super to the honey-house, while the apiarist takes off another super and places on the stand, or moves to the next hive. By this plan the surplus honey of a large apiary can be taken off in one day, and in the best of order, and without bother from robbing.

The objection to the plan is the rough and cruel treatment necessitated to the bees. I con-

fess not to have been in favor of the introduction of bee-escapes; but the Dibbern bee-escape overcomes my anticipated objections; and believing that our bees deserve humane treatment at our hands, I shall use it hereafter in taking off my honey.

Dr. G. L. TINKER.
New Philadelphia, O., Aug. 15.

STILL FURTHER TESTIMONY.

On page 556 I find the following: "I hope, if they are not already what they ought to be, that some inventive genius may find out where the trouble is, and give us an escape that can be placed under a case of sections or an extracting-super at night, and rid it of bees before morning."

While I think that Mr. Doolittle will find that we can never get an escape to work just as he has stated in the above sentence, I wish to say that that "inventive genius" has already put in his appearance. I have been using bee-escapes all summer, and they have given me such satisfaction that I feel safe in saying that such escapes as I am using will give as much satisfaction in a practical way as T supers or bee-smokers. While bee-smokers will occasionally go out or burn out just about the time we need them most, they are indispensable to success in keeping bees. So with T supers: while they are objectionable in some respects, we can not dispense with them until we find something better to take their place. And we have a bee-escape that will get the bees out of surplus-receptacles, and keep them out; but I have found, that, when the escapes are placed on the hives late in the evening, or even after the middle of the afternoon, but very few, if any, of the supers will be cleared of bees by daylight or sunrise the next morning, simply because the bees appear not to be inclined to change about or leave the supers during the night.

I have taken off over 1800 lbs. of comb honey with as little inconvenience, and less trouble with bees, than I usually experience in taking off 100 lbs. By adjusting the boards in the morning, say from 7 to 9 o'clock, the supers will usually be ready by 1 or 2 o'clock in the afternoon; and, if the boards are immediately adjusted under another set of supers, these can be removed early the next morning, thus using the same escape twice in one day. The honey-flow, conditions of the weather, and the disposition of different colonies of bees, all these have their influence, and tend to make up a varied experience in the use of bee-escapes. Colonies that are quiet and not easily disturbed are slow to move out of the supers; and hives that are overcrowded with bees, if the weather confines them to the hive, will so choke up the outlets of the escapes that the bees in the supers appear for a time to be unable to force their way out. But these are exceptional cases; and in the latter, two escape-boards, placed one on top of the other, soon clear the super.

The cone escapes can not be made satisfactory. I have used cone escapes that are much superior to the Reese or Dibbern patterns, which have worked reasonably satisfactorily under ordinary conditions, but in every-day work the bees find their way back through them more or less. What is wanted, and what I have been using for nearly three months, is an escape that will permit the bees to pass out easily and rapidly, and at the same time allow no bees to return. The inventor of these escapes is a bee-keeper of this county; and while he is endeavoring to get up something that is of practical utility, he is in no hurry to offer escapes for sale, preferring to give them the test of a whole season's operations.

S. A. SUECK.
Liverpool, Ill., Aug. 23.

MORE ON HORIZONTAL BEE-ESCAPES.

In regard to the working of the horizontal bee-escape, friend Dibbern's four-point escape is not a success. Mr. D. has a new tin escape that works nicely. I have been testing it for two weeks. It will rid an extracting-super in two to three hours, and the bees stay out. It will clean the bees out, even with brood in combs; but they are longer in leaving. The hives were full of bees, and I did not put on an empty super, so you see they went down into the hive already crowded with bees. I was much pleased with the first one Mr. D. offered for sale, and I made up a lot of 25; but I was soon disappointed, for they did not clean a case of honey in a week. But I found a use for the boards, and will keep them for introducing queens, feeding, and covers for super cases.

Unionville, Mo., Aug. 16. E. F. QUIGLEY.

HORIZONTAL BEE-ESCAPE A SUCCESS.

You ask for accounts of the use of the horizontal bee-escapes. I am very much pleased with the working of mine. With them I can take off my honey without any use of smoke or disturbing the bees, or exposing the yard to robbing. I prepare the board to fit in the inside of a super, resting on the tins which support the frames. An assistant takes the super thus prepared, and stands ready to slip it on the hive as I lift the super with honey, and then place it on the super containing the escape. The whole operation takes but a moment. The next day I take the top super away undisturbed, and leave the escape till I prepare them for winter. A small piece of burlap takes the place of the tin; and this covered with a woolen quilt, the winter work is done.

G. A. ADAMS.

Perrysburg, O., Aug. 14.

HORIZONTAL BEE-ESCAPE ALL RIGHT.

I see by GLEANINGS that the horizontal bee-escape is not working satisfactorily for friend Doolittle and others. I am using it, and with good results. I made my escape-board so as to give a double bee-space between it and the sections or frames below. The escapes were made so as to give $\frac{3}{4}$ of an inch space between the sides of the inside and outside escape. If I make any more escape-boards I shall try a full inch space between it and the hive or case of sections below. The bees will not cluster so thick on the escape, and will not be so apt to find their way back into the upper case of sections.

My bees are doing well. I have secured 150 pounds clover honey (comb) from five colonies, spring count. I expect twice that amount from buckwheat and fall flowers.

D. I. WAGAR.

Flat Rock, Mich., Aug. 8.

ANOTHER FAVORABLE REPORT.

As you ask for reports on bee-escapes, and as I used six Dibbern improved escapes, I report that I found them a success under section honey every time. When used under extracting-cases I met with two failures; but on examination I found in one case there was brood; in the other case, no perceptible cause, so I count only one failure. Of course, there were sometimes from 12 to 20 bees that had not worked out—never more, and frequently none. Few inventions are perfect. With me the bee-escape is as near perfect as the bees themselves, for they have failed here right along. From 40 colonies, spring count, I have 1200 lbs. extracted and 350 lbs. comb, and no rain to insure honey. Never before have I had unfinished sections of comb honey enough for bait the following spring; but I have them now to spare. Well, they are not the trouble I expected them to be. I cut

them out and fill the cracks with extracted honey, and they go like hot cakes in my home trade. I shall have no other this year. In fact, I shall lack at least one ton of enough extracted honey, and probably be 1000 lbs. short on comb honey. I have been trying to buy, but so far I have not succeeded in getting an article that I felt justified in buying at prices asked.

Moberley, Mo., Aug. 9.

J. RICHARDSON.

BEE-KEEPING IN NORTH CAROLINA.

A VISIT REVEALING EXCELLENT TERRITORY,
WITH FEW BEES AND POORER METHODS.

As per promise, I will send you a few notes gathered from a tour of the mountain counties of this State. In company with a friend I took leave of this, a rather central location, to see what could be found of interest in the line of the bee-industry. The first thing to impress us was the extreme scarcity of bees. This fact is the more striking when we are forced to conclude that these mountain counties are the very paradise of the honey-bee. The famous southern wood, which is the basswood of the South, abounds on every hand. Then there is a long list of nectar-producing plants and trees that give an almost continuous flow from February till frost. There are immense tracts of forest that will remain such, as the lands are not fertile. We found a few bee-keepers who had in use the Mitchell, or "adjustable" hive, and the old American. All claimed to be using patent hives, for which they had paid.

The first call we made was with a good brother bee-keeper who claimed to have 150 colonies, all in the Mitchell patent division-board-adjustable-reaction hive. He said he was very much wedded to this hive, but he said his confidence in the inventor was not as strong as in days of yore. We were so completely dumbfounded when this friend told us that he had never used a bee-smoker, nor taken a bee-journal, that we forgot to hand him a copy of GLEANINGS from our grip, and also to show him a Clark smoker we had with us. In justice to this friend, we must say that he owned up to having had a copy of King's text-book, but that he had not seen it in years. We will take leave of our good host when we say that his success in bee culture is not the kind that succeeds, taking his own statement for it.

We made a few minutes' call on another bee-brother who has about 20 colonies in the American hive. His bees were too high for the weeds to trouble. His crop of honey last year was fine, but had in a measure failed this season. On being asked if a good crop once in two years did not pay him to keep bees, he said it did. We gave this friend a copy each of the *American Bee Journal* and GLEANINGS. These men are about a type of the bee-keepers of this, as good a field, all things considered, as can be found south of the Mason and Dixon line. Almost all have the black bee.

We heard the most remarkable stories in regard to the fall of honey-dew during last winter. One reliable man told of his pants becoming coated while rabbit-hunting in the sedge-fields. We should like to hear what Prof. Cook has to say in regard to a winter crop of honey-dew.

Our bees had begun to nose around the cotton bloom before we left, and, to our pleasant surprise, we found them fairly rich, all from this source. One-third of this time was very rainy too so bees had only about ten days to get from a starving condition to a comparatively prosperous one. This was so only with colonies that kept brood-rearing right along through June.

I am glad to say my dish was nearly right side up. Our cotton honey is excellent in quality. I will mail you a sample soon.

The Dovetailed hive is being introduced here, and will, I think, become popular. Friends Cauthen, Simpson, and myself, have been using this hive for several years—the same except the dovetailed corners.

A. L. BEACH.
Pineville, N. C., Aug. 14.

POPLAR.

CAN WE FIND A SUBSTITUTE FOR BASSWOOD FOR SECTIONS?

I have noticed considerable stir among our Northern bee-writers in regard to the consumption of basswood timber for sections and other purposes; and some are taking measures to withhold this rapid destruction of the timber, and suggesting substitutes for it. This is certainly the proper thing; but we should move slowly, be sure we are right, and *then* we can go ahead with the minimum of friction.

I greatly fear that those who have discontinued the use of basswood sections, and adopted poplar (or tulip) as its substitute, have not bettered the matter very materially, so far as the general welfare of the bees is concerned. Our Northern friends do not seem to realize fully the real value of the poplar as a honey source, perhaps on account of its scarcity there. While basswood is *very* scarce here in Southern Ohio, poplar fills its place, and fills it well. I do not know very much about basswood as a honey-producer except as I read what is reported through the journals; but I should not hesitate to say that poplar will at least "hold its own" with basswood, every time. White clover is perhaps at the head of the entire list of honey-producing plants, as A. I. Root says in his A B C. Yet bees in this locality gather as much honey from poplar in fourteen days (the average length of time of poplar bloom) as they do from clover in fifty days (the average length of time of white-clover bloom). I feel certain that the fully developed blossoms will average half of a teaspoonful of nectar; and when the trees are in full bloom, the bees get themselves all daubed, just as they would if they were taking honey from a dish. So those to whom the poplar is a stranger can form some idea of its honey-yielding properties. But the honey is not such a fancy article as that from white clover or basswood. In color, it is a little dark, or golden. After all, this is no serious thing; for coming, as it does, between fruit and clover bloom, the bees make use of most of it in filling up the brood-chamber, so we do not get a great deal in the sections.

But here is the point: There is a period of about three weeks between fruit and clover bloom, during which the bees could not get enough to run them, and would have to be fed during the whole time to make them prosper properly. But as it is, we are not compelled to feed. We have just the thing we want. Instead of feeding to keep up brood-rearing, the bees are rolling in the dark poplar honey until they have the brood-chamber crammed full, and many are already up in the sections ready for the whole crop of clover honey, which follows close, for surplus.

It is hardly worth the space to say that our poplar is, and has been for some time, meeting the same fate as the northern basswood; indeed, a *worse* fate, for, as every one knows, poplar timber is being used for purposes almost innumerable.

J. C. ATKINSON.
Nelsonville, Ohio, Aug. 18.

Friend A., your points are well taken. The

destruction of the forests is certainly going to have a marked effect on bee-keeping as an industry; and unless forests are planted, or fruit, or some other honey-bearing trees, in sufficient quantities, there is trouble ahead.

DO BEES CHANGE NECTAR?

PINE-TREE HONEY.

In your reply to D. A. Rothrock, July 1, you say that bees do not change the nectar in carrying it from the flowers to the hive. Last winter I sent you some samples of pine-tree honey-dew, and I now send a sample of honey made from it. I know it is genuine, as I placed an empty comb in the hive, and extracted the honey from it; and as it was in the winter, there was no possibility of their getting honey from any other source. You will observe that it has a "honey" taste, while the honey-dew tasted more like sugar syrup. It is darker (it was not as dark, however, when first extracted), having stood in a bottle since March. The honey-dew I had collected in vials soured; this does not. When the honey-dew had collected on the bark and evaporated, it left a lump of what looked and tasted like white sugar. I don't think this will. If you feed bees honey, what can they store but honey? and if it is scorched, or bad in any way, of course it remains so; but I can not think they store anything but honey, no matter what they collect, and said honey is of different quality and taste, according to the substance from which it is made. You are very positive and earnest in denying charges of the

ADULTERATION OF HONEY

by feeding bees. Are you sure that some of the large quantities of sugar that we read of some apiarists feeding to their bees is not taken out and sold as honey, and that there is not enough margin for a fair profit between the prices, when sugar is bought by the wholesale? We have had no surplus honey as yet, as there was but little of any kind of bloom in the spring, and the honey was mostly consumed in breeding, which was very early and profuse. The honey-dew appeared again, however, about July 15, and they are now booming.

Amherst, Va., July 31.

J. OSBORN.

Friend O., we are all very well aware that bees evaporate, or ripen, honey in the combs; and we also know that well-ripened honey is very different from the raw nectar, as gathered from the flowers. This ripening process can be done artificially, nearly if not quite as well as the bees can do it. The raw nectar from the spider plant has a green, sickish taste, or something that way, when you gather a spoonful or two; but hold it in a spoon over a lamp until it evaporates, so as to be as thick as thick honey, and it has a very delicate, pleasant flavor.

In regard to feeding bees to get honey, all that is needed to show the folly of such a course is to try it. See what is said in the A B C book in regard to feeding honey back to get sections filled up. I don't think there has ever been a time when any bee-keeper could make it pay to feed his bees sugar so as to sell it for honey after they had sealed it up in the combs. The matter has been discussed in our journals for 20 years back. We may feed cheap

sugar to keep the kees raising brood so as to make it pay, without question; and many bee-keepers do this, but no bee-keeper is now feeding sugar in order to get something to be sold as honey. He will surely become bankrupt if he keeps on at it.

QUEENS LEAVING THE HIVE.

DO THEY DO IT?

Do laying queens ever leave the hive, when not accompanying a swarm? My experience is, that they sometimes do. The present season I have about thirty hybrid colonies that I bought last spring; and wishing to raise queens to sell I am using an Alley drone-trap on each hybrid colony, to keep the drones shut in. In the past week I have found the queens of four colonies dead, in the upper apartment of the drone-trap. It is possible, but not probable, that the queens died and were carried there by the bees. They were all young laying queens, raised this year, and were purchased of one of our most eminent queen-breeders, and had been introduced and laying at least three weeks.

My bees have been working on buckwheat, and swarming, the last two weeks; but I have never been out of sight of the bees long enough for them to swarm without my seeing them, so I do not think it probable that they got into the trap by going out with a swarm.

By removing the wire nail that closes the opening between the upper and lower apartments of the drone-trap, the queen could return to the hive; but that would let the drones back too, and one would be obliged to keep the traps on all summer to keep the drones in.

In C. C. Miller's article in GLEANINGS, Aug. 1, page 559, he asks, in conclusion, why the queen does not lay drone eggs in incipient queen-cells where they surely would have elbow room. In my eight years' experience in queen-rearing I have found queen-cells built on drone comb several times, and that, too, when the bees had worker eggs in plenty to build cells on. As I was anxious to know what kind of an animal they would hatch, I watched them closely, but they invariably failed to hatch at all, the larva always dying in the cell before hatching.

ELMER HUTCHINSON.

Rogersville, Mich., Aug. 19.

NOTES FROM RHODE ISLAND.

THE HOFFMAN FRAME, ETC.

Although "Little Rhody" is not much of a honey State, its bee-keepers pride themselves on keeping abreast of the times in the apicultural world. They are constantly trying new paths and short cuts, and endeavoring to outstrip their neighbors of "wooden nutmeg" fame, and leave behind "ye pilgrims of ye olde Baye State." We bee-keepers about the shores of beautiful Narragansett find we must modify systems successful elsewhere, to fit our climate and flora, which, to say the least, is often erratic.

This year there was a good flow of honey all through July, coming from an early variety of goldenrod and two varieties of spirea. This July flow is unusual, bees generally having to live on what they have laid away. To be always ready for these irregular flows we have to keep the queens constantly at work. August and September seldom fail to bring good flows. Perhaps when I say that, in three of the best apiaries in the State, the Hoffman frame is

used to the exclusion of all others, you will think some of us are progressing backward. Be that as it may, the owners of these apiaries will now tolerate no other style, except for experiment.

If you will try the standard Hoffman frame beside your modified style, you will, I think, be convinced of the points of superiority of the standard as explained by Mr. Hoffman in GLEANINGS for July 1st.

I find the same trouble with a deep (1½ inch) space under the frames as does Mr. Hatch (Aug. 1, p. 561). During the past three seasons, with from 1 to 20 colonies so arranged, the result was always the same.

If Ernest will take foundation partly drawn out, and try his experiment of stretching while it is yet warm and soft from the heat of the hive, the result, perhaps, will be different.

As for the way bees build their comb, they do not always go "according to Hoyle." I took from a colony a few days ago a new comb, one-third of which was built as it should be, and the other two-thirds as it is said it should not be. It was built on a new clean frame without any foundation or guide whatever, and by a good thrifty colony in normal condition. That colony evidently needs educating. But once have I had drones driven out in June (1889) when honey was fairly plentiful. I ascribed it to an unusual scarcity of pollen; for as soon as that became abundant again, the drones were undisturbed.

ARTHUR C. MILLER.

Providence, R. I., Aug. 9, 1890.

HEADS OF GRAIN

FROM DIFFERENT FIELDS.

HONEY FROM COBEA SCANDENS.

One fine morning I noticed on my porch some drips that I couldn't account for; porch rather dusty, and there were the drops, eight in number, and not a sign of any thing to show from whence they came (I thought). It was mysterious to me, as my folks had been away from home some two months, and I thought more or less about it all day. The next morning I found the porch fairly spattered with it; and tasting, I found it honey. In a moment it flashed on me (flowers). Covering all the porch are luxuriant vines of *Cobea Scandens*, whose bell-shaped flowers are daily loaded with honey, clear as crystal. It took the bees about two days to "tumble;" but now as many as five at a time can be found in a single flower, and every morning the drops hang and glisten so plentifully you can gather it with a spoon. It is something new to me, or at least I've failed to notice it heretofore.

The season is poor for surplus, fair for increase; some few swarms coming, even this late. As usual, Italians in the lead.

Portland, Or., Aug. 7.

E. J. LADD.

A NEW USE FOR PERFORATED ZINC.

The honey crop is small this year. From 200 hives, fall count, I have extracted 1500 gallons; cause, too much swarming late in the season, when they should have been gathering honey. I have found a new use for your perforated zinc. I place one on a weak two-story hive. I hive the small swarms in the common wooden water-buckets, and set them on the zinc. The bees will go down through the zinc and leave the queen on the zinc. By doing this, weak hives can be made very strong. I then keep putting on top hives, and hiving small swarms, and I have no trouble about fighting, as the bees are

gathering honey. The above is very old to the veterans, but new to the A B C's.

I see much in the bee-papers about planting for bees. Almost all say it doesn't pay. I have been experimenting a little on that line. I got half a bushel of white-clover seed of you. I sowed it in February and March, 1889. Not a seed has been seen since. White clover does grow here. Bees work a great deal on mustard. It is almost a constant bloomer, if planted, say, every 15 days. J. W. PARK.

Columbia, Tex., Aug. 14.

FROM 2 TO 7, AND 100 LBS. OF HONEY.

I received the queen in good condition. She now has the hive full of brood and eggs. I was much surprised to find I had sent too much for her. I have never had a pure Italian before. I started last year with two colonies of blacks in rack hives. I got from them 7 swarms and 100 pounds of box honey. They wintered well, but I lost one this spring. I have had 12 new swarms this year, but will get no surplus, on account of the dry weather. It has been very dry. I had to feed during white clover. I think they will winter if we get some rain. My bees, both blacks and hybrids, are very gentle. They hardly ever sting unless I pinch them. If my queen lives I am going to try Italians another summer. I hear them praised so highly I will report how I like them. E. J. BARBER.

Corinth, Miss., Aug. 13.

ARE BLACK BEES LESS LIABLE TO DISEASE?

I have 100 hives of black bees. I don't doubt but that the Italians would make more honey. I have never seen a case of foul brood, nor heard of any in this part of the country. Possibly there is no connection between having all black bees and no foul brood. Won't you please answer briefly the following questions?

Are not black bees proof against foul brood, sometimes, when Italians are not?

If Italians are more prolific than blacks, are they not also more inclined to swarm frequently?

J. S. CALLBREATH.

Rock Rift, N. Y., July 4.

Black bees are no more proof against foul brood than Italians. In England and Germany, where black bees are the prevailing race, foul brood has made its mischief for many years.

As Italians often get honey when common bees do not, they sometimes swarm when common bees do not.

A CORRECTION IN NOMENCLATURE.

I have just been reading GLEANINGS, and I notice an article on page 526 upon "Apicultural Nomenclature," in which the writer, in trying to correct one error, has fallen into another. The writer states that "cottonwood, balm of Gilead, and quaking aspen, are all different trees, though very nearly allied to each other. The poplar is of another and distinct type." Partly right and partly wrong. Botanists, for convenience, have grouped all plants, including trees, into families; and again some of these families are divided into sub-families. The willow family is one which has a division, and one of the parts, or sub-families, is called *Populus*. In this division are found several members—two aspens, the American and large-toothed; five poplars, the downy, balsam, white, Lombardy, and necklace (the last of which is called cottonwood), and the balm of Gilead. These are all different trees, but closely allied, as Mr. T. states, only he should have included the poplar. He says the poplar and tulip-tree are the same. Now, the tulip-tree belongs to the magnolia family, and that is about as near

like the willow as the rose is like the milkweed family. Prof. Asa Gray says, that in the West the tulip-tree is wrongly called the poplar. There is no tree named whitewood, but it would seem as if all trees whose wood is white are in certain places called whitewood.

Geneva, N. Y., July 25. PATTIE MASON.

MAKING HIVES AND FIXTURES BY HAND: BEST HONEY SEASON.

I have made 100 hives, all of the frames, and 2000 sections and 1600 separators, all sawed by hand power, so you can see that I wished I had a good engine more than once. I have now 118 stands of bees. I took off 340 lbs. of honey, and have about 1000 lbs. to take off this week, all in 1-lb. sections. The honey is the whitest I have had since I have had bees, and the best honey season so far.

THE WORK OF BAD BOYS, AGAIN.

I had to go out and fix up a hive that two boys were trying to steal honey from about an hour ago. It is 12 o'clock at night now. I hope you have not any boys of that sort out there. If they had wanted honey, and had come to the house, I would give them all they wanted to eat. As it was, the bees were not asleep, and they lost their honey, and had a lively run.

Dover, Mich., July 28. A. N. WHITLOCK.

QUEENS LOST ON RETURNING FROM THEIR WEDDING FLIGHT.

I have been losing a good many virgin queens during mating this summer. I had a nucleus in an observatory hive, and saw the queen take a flight about four o'clock. She came back in about five minutes, successful. Immediately on entering the hive she was balled; and as I did not suspect any thing wrong she was killed in a few minutes. Is it a common occurrence, and is that the reason I have been losing so many virgin queens?

The horizontal bee-escape has worked well with me this season, nearly all the bees being out of the sections in the morning, if put on at night—perhaps a few in one or two sections.

LLOYD SECHRIST.

Pleasant Home, O., Aug. 6.

Friend S., such things are not very common, although they do happen, especially when there is a dearth of honey. I have never known it to continue long enough to do much harm. I have sometimes thought it was caused by placing hives so close together that the bees were in the habit of mixing, until they get into a quarrelsome frame of mind.

CATCHING QUEENS BY MEANS OF THE PERFORATED ZINC.

□ Here is a quick way to catch black queens, and it will work equally well on any kind of queens. Take one sheet of your queen-excluder, say 13x20, make a box two inches deep, with bottom and sides of thin stuff—no cover. Now make one the same size out of 1½" stuff, ¾" wide; now nail on zinc excluder for the bottom, and the thing is made. Take it out into your beeyard; set it down about a foot in front of a hive, the deepest part first; then put on the zinc with the rim up, to keep the bees from running off the sides; then use a little smoke. Pick up the frames with the bees all on. Now, do not stop to look for the queen, but give it a quick shake in the box on the zinc, then take another the same, and so on, as fast as you wish to, and you will soon see the queen on the zinc. The bees have gone through as fast as shaken on in the box below, leaving the queen in plain sight. Pick her up, shut up your hive,

pick up your zinc, shake it in front of the hive, the box the same. All can be done inside of two minutes. It is quick, easy, and robber-bees have no time to find what you are at before the thing is done. We have caught 16 in two-story hives, in 28 minutes. Try one; and if you do not laugh, charge it to me.

Fulton, N. Y., Aug. 12.

OSCAR DINES.

Friend D., the use of sieves with a bottom of perforated zinc is very old. Quinby described it, if I am not mistaken, in one of the first editions of his book. Your arrangement, however, seems to be a very convenient one. We have used such devices to some extent; but as we ordinarily find our queens in less than a minute, it would hardly pay us in our business. Our colonies, for the purpose we use them, and with the metal corners, are very easily looked over.

WHAT WOULD BE PROPER RENT FOR 500 COLONIES?

If I should own an apiary of 500 or 1000 colonies, and should not desire the care of it, for what could I rent it in cash, the renter to have honey yield and none of the increase? Would it be best to have so many colonies of bees together, or would it be best to separate into apiaries of 500 each, several miles apart? My apiaries would be in Colorado.

MISS LIDA WINSLOW.

Carthage, Ind., June 28.

My friend, I do not know how we can answer your question. In the first place, I do not believe in renting bees. Sell them outright at some price, and have it done with. If, however, nobody around you is willing to buy, but is willing to rent, I would put it like this: For instance, the renter is to take 500 colonies of bees, and turn them over to you in one year, in as good condition as he found them. Let him pay you as rent the ordinary rate of interest on the value of the bees, as nearly as you can give on a fair valuation. Then let him have every thing he can get out of it—honey, increase, wax, and every thing else. If you undertake to put in a lot of conditions you will complicate the matter and open the way to no end of dissatisfaction and complaint, perhaps on both sides.

SELLING HONEY BY THE SECTION: WIRING FRAMES, ETC.

The grocers in Middletown, this county, so far as I know, buy honey in sections by the pound, but many of them sell by the section, and not by weight. I have tried to convince some of them it was not a fair way of selling, but it is less trouble, and that suits them.

I have a nephew in business in Honesdale, Pa. I was there last winter. He was selling sections at 15 cts. each; paid 12 cts. per pound for them. They did not average near one pound in weight. As far as my observation goes, fully as many sell by the piece as by weight.

In using tin bars in wired frames I set the edge of the bar against the foundation and not the flat side. It takes up little room, and is not in the way, for the bees build up to it and cover it all over. I use 7 instead of 6 upright wires, having one in the center, the tin bar on one side of the sheet, and the wire on the other. Your old way of wiring frames can't be bettered.

Will some one who can do it, please tell in

GLEANINGS how to get the bees to carry the honey from partly filled sections to the body of the hive when they need it for winter stores?

I have a fair crop of honey this year. I have been in the business here for 11 or 12 years, and in that time have always got some surplus, and, with the exception of two seasons, have had good crops.

New Hampton, N. Y., Aug. 8.

Friend H., I fear I shall have to give up that honey is sold by the section a good deal. Notwithstanding, I think it is a wrong way of doing business. But it seems to me that the dishonesty lies on the grocer and not on the bee-keeper. We can not well make our sections to average a pound, very closely, or any thing very near it.

NOTES AND QUERIES.

DIBBERN BEE-ESCAPE—A GOOD REPORT FROM.

I would say I have used the Dibbern bee-escape, and it gives good satisfaction by putting it on in the evening. The bees were all out of the T super excepting about ½ dozen the next morning.

D. BECKMANN.

Wheatland, Iowa, Aug. 7.

HANDLING BEES WITHOUT SMOKE.

You speak of handling bees part of the time without smoke. I believe that with a little practice, any person could get along without smoke. I can handle hive after hive without it.

Lewiston, Mo., June 30. H. MANSPERGER.

[You can get along without smoke at times, but it takes more time. A little whiff over the tops of the frames will so mollify the bees that you can work faster ordinarily.]

QUEEN-CAGES FOR LONG DISTANCES.

What kind of cage or device do you consider the best for shipping queens long distances (say 18 days' journey)? Is it absolutely necessary to supply queens with water for such long journeys?

WM. STYAN & SONS.

San Mateo, Cal.

[We prefer the Benton cage for long distances. We formerly put small tin bottles of water in the cages; but within the last few years we have not found it necessary.]

CONTRARY TO NATURE: A NUT FOR DOOLITTLE TO CRACK.

Not long since a pioneer bee-keeper was passing through my apiary: and observing a large bee (it was a drone) he said they were the *she* bees. He said he did not believe in killing such bees, as it was "against nature." Shades of Doolittle! Somebody is certainly behind the times. Doolittle says he cuts their heads off in the combs. Leading lights sometimes disagree.

Shiloh, O., July 19.

T. F. KIMEE.

[Friend K., I have got to be a little suspicious of anybody when he goes to preaching "against nature;" that is, when somebody complains that you are against nature because you use the intelligence that God has given you.]

NAILS AS SPACERS FOR FIXED FRAMES.

I have watched the discussion on fixed frames, to see the different methods of spacing. I take some of those wire nails, drive in the top-bar about an inch from each end, just far enough to space the frames. I have a gauge, and lay it beside the nail and drive until it is

even with my gage. I do not remember the width of the gage without going to measure, but that depends upon the width of the top-bars. The nails answer every purpose for me.

Shreve, O., July 18.

C. B. WAY.

THE NEED OF THICK TOP-BARS.

I lost a valuable colony of Italians by the Simplicity hive becoming so sealed between the first and second story, and not being able to separate. When the bees were dead I took severe measures; and after separating, I found the worms had taken possession. This colony had given me over 50 lbs. of box honey each season.

A. FAMARISS.

Beverly, N. J., June 14.

[This is why we look forward to thick top-bars as doing away with all this trouble. The trouble was not in the hive, but in the thin top-bars which allowed burr-combs to be built.]

SPACE BETWEEN FRAMES: IN FAVOR OF NARROW SPACING.

In getting brood into my little combs for fertilizing hives, I have experimented a great deal on space between combs, and have come to the conclusion that $\frac{3}{8}$ (a little scant) is about correct. At this space all the combs are filled to the top-bars perfectly flat and smooth. In order to maintain the space accurately we use little spacers to attach to our finger, like a thimble. All our frames are one inch all around, and cut with perfect accuracy.

Marlboro, Mass.

E. L. PRATT.

[Thanks for the result of your experience. I am pretty sure that $1\frac{3}{8}$ from center to center is not too wide, and perhaps we can do with less.]

OUR QUESTION-BOX.

With Replies from our best Authorities on Bees.

QUESTION 167.—*Will it be safe for me to ship off comb honey without brimstoning it? 2. Did you ever know worms in sections where there was no pollen?*

It may and it may not be. 2. Yes.

Ohio. N. W.

A. B. MASON.

Yes. 2. Yes, but not very often. Worms can not live long on pure beeswax.

Illinois. N. W.

DADANT & SON.

I have never shipped comb honey. 2. Yes, a few.

Wisconsin. S. W.

E. FRANCE.

Yes, if shipped early, and if it contains no pollen. 2. No, I think not.

Vermont. N. W.

A. E. MANUM.

I don't know. I have never brimstoned any. 2. Yes, brood will bring worms; occasionally a worm without.

New York. C.

P. H. ELWOOD.

Usually, yes; occasionally, no. If eggs are laid on the combs they will hatch with or without pollen. I do not think the larvæ would mature without pollen.

Michigan. C.

A. J. COOK.

The least honey we get is brimstoned. I would not brimstone my honey unless it were necessary. 2. I generally found pollen in the combs that had bee-moth in.

Ohio. S. W.

C. F. MUTH.

Yes, sometimes; sometimes no. 2. Thousands of them, where there was no visible pollen; but the microscope reveals pollen where it is not seen by the naked eye.

New York. C.

G. M. DOOLITTLE.

I have not found it safe for me to do so. 2. Oh, yes! lots of times. They are very apt to come on the edges of cells close to the wood. I have even seen them come on foundation.

Illinois. N.

C. C. MILLER.

I think so. I have raised and shipped a number of tons of comb honey, and I never brimstoned a pound of it. 2. No, nor did I ever see fifty sections with worms in from any cause.

Illinois. N. C.

J. A. GREEN.

If it has been kept for some time in a warm room I should prefer to fumigate it before shipping in very large quantities. 2. Yes, except what was contained in the honey.

Ohio. N. W.

H. R. BOARDMAN.

I am not an extensive comb-honey producer, but I have not brimstoned what little I have had. I heard no complaint from the 2500 lbs. that I sent out last season. 2. To some little extent.

Wisconsin. S. W.

S. I. FREEBORN.

If taken off in hot weather and shipped immediately there would be danger of worms unless brimstoned. 2. I have known the surface of sections to be webbed over and the cappings destroyed in many crates where there was no trace of pollen.

New York. E.

RAMBLER.

No, not at this season (early summer). 2. Yes! i. e., where there was no pollen practically—no cells of pollen; but there is a little floating pollen in most, if not all comb honey. Sometimes the amount is so small as to be undiscernible to the naked eye, and would probably cut no figure in the moth or worm question.

Illinois. N. W. C.

MRS. L. HARRISON.

Yes; if you have the right kind of bees, such as we think we have, and use proper care about your apiary and buildings, you will have no use for brimstone. I do not think I have seen a worm in any of my comb honey for many years. I believe it is a physiological fact, that the moth-worm can not develop without the use of pollen.

Michigan. S. W.

JAMES HEDDON.

I think that in most apiaries the sections are rarely troubled with worms. I would not fumigate unless there were reasons to apprehend trouble. 2. I do not positively know it, but I have the impression that they do sometimes occur. I believe it is several years since I have noticed a worm in my comb honey at all. I lay it to my farming neighbors not keeping bees, and tolerable care on my own part not to breed the mothers of the mischief.

Ohio. N. W.

E. E. HASTY.

I think I have said in the A B C book, that I would never go to the trouble of brimstoning honey until I discovered the minute worms somewhere about the honey; and I have also said, further, that with the Italian bees the fumigation is seldom if ever necessary; and I believe that a majority of the answers above pretty nearly agree to this. It just now occurs to me, that, if the moth-worm can not mature without pollen, is it very strange if the larva of

the bee can not, in a like manner, mature without pollen as well as honey for the nurse-bees?

NOTES OF TRAVEL AMONG YORK STATE BEE-KEEPERS.

AT G. M. DOOLITTLE'S.

The ride by boat on the beautiful Lake Skaneateles to Borodino was fine. The water was so clear that, just before starting, I could see large fish at a depth of 12 or 15 feet off the dock. As we steamed out into the lake, the beauty of the scenery became more and more manifest. The shores rise gradually from the water's edge, and off in the distance little towns are pointed out.

"Over in that direction," said the captain, in answer to my inquiry, "is Borodino."

Doolittle has a beautiful location. I thought. There are never any mosquitoes around this lake, I am told; and the water is so clear, and the shores so inviting, it is a wonder that the lake is not more visited by pleasure-seekers. In about half an hour I was landed on the Borodino dock. As it was rather late I put up at the hotel. The following morning found me on the wheel, sailing toward the home of Mr. Doolittle, for his place is about a mile out. I looked along the road to see if I could pick out Mr. D.'s home. That place doesn't look exactly like it. Finally, from the top of a hill I see a very pretty country residence. Every thing about the place shows neatness and taste, and the buildings are well painted. I wonder if *this* is not the place. As my bicycle travels noiselessly along, suddenly an apiary looms up in the rear. Yes, there is a bee-cave. This *must* be the place, and so I turn in. I lean the bicycle against an overspreading apple-tree by the side of the house.

"Is Mr. Doolittle in?" I inquired of a man in the barn.

"He is in the shop and will be out presently."

I strolled into the apiary meantime, wondering whether my friend would recognize me. After waiting a moment somebody steps from the shop. He has a sandy beard, and he looks like a portrait I have seen somewhere.

"Good morning!" I said. "This is Mr. Doolittle, I suppose?"

"And is this Ernest?" said he, grasping my hand. "I had not expected to find you wearing glasses."

"I have been using them ever since I left school, five years ago, and ought to have begun wearing them sooner."

Together we went into the shop. I noticed he was very careful to close the door after him; and the fact that there were no robbers about was pretty good evidence that this was his habit.

As I expected, every thing was orderly. In one end of the shop was a small boiler and engine; near the center of the room, a saw-table; beside the windows, a work-bench. Two rooms were partitioned off. One was a bee-proof honey-room, and the other a general study, or sanctum, where he can be in seclusion and write his articles for print. In the latter room he showed me his Hammond type-writer, the machine that does the nice work he sends out. I found it was very simple, and easily operated. A large telescope, mounted upon a substantial tripod, occupied a space upon the floor. The owner not only studies the handiwork of God as he finds it among the bees, but he is delighted with what he learns and sees beyond the vale of this world.

"Mr. Doolittle," I said, "I notice you are in-

terested in one of the branches of optics. Why don't you take up photography, and so illustrate your articles occasionally?"

"Well," said he, laughing, "I had thought of that very thing, but I came to the conclusion that Doolittle had no time with all his other work, to fuss with it."

When it is remembered that he does *all* his work in the apiary, wraps and directs all his queens, answers all his correspondence without the aid of a stenographer, writes regularly for several periodicals, makes all his supplies, keeps up a good garden, takes care of a horse, to say nothing of the services he renders to his church and town, we comprehend somewhat the force of the remark, that "Doolittle has no time" for another branch of optics.

He is precise and methodical in all his work, especially so in queen-rearing; and as it is not an easy matter to get help possessing all these requirements, Doolittle prefers to do Doolittle's work.

Upstairs in the shop Mr. D. has a collection of bee-implements, old and new. He showed me a box containing some old-style honey-boxes, which a few years ago, out of the kind intentions of a supply-dealer, had been sent him by *express*. The charges were \$7.50. There was no letter of explanation. Mr. D. paid the charges, and the boxes he has used for kindling-wood. At other times hives and other implements had been sent him, charges paid. He had never even opened some of these packages, as he had no use for them. I take pains to mention this right here, as we have been many times served in the same way. While all this is prompted by kind intentions, don't send stuff without first writing to see whether it will be acceptable.

But, to return:

Mr. Doolittle lighted his smoker, a Bingham.

"I suppose," said he as we started, "you don't wear a veil."

"Oh, yes, sir! I do. It's my father you are thinking of."

At this I pulled out my veil, for I carry one with me everywhere, and we together went among the bees.

We looked at the progeny of some of his breeding queens. They were very beautiful. The bands were of a deep yellow, and four in number. Although our friend made no claims as to the fifth, the latter (or what looked like it) showed faintly. The bees from his breeding queens were as handsome as any I ever saw. He did not claim to have originated them, he having obtained them of a bee-keeper who is now out of the business. Mr. L. C. Hearn obtained one of these queens of Mr. Doolittle, and Mr. Timpe, in turn, of Mr. Hearn.

"Now," said Mr. Doolittle, "what next would you like most to see?"

"Suppose we look at some of the cells reared in upper stories. I have my camera here, and I should like to see and show to our readers whether you practice what you preach."

We selected cell-building colonies at random. In the first one we examined there were almost perfect rows of cells built on the artificial bases.

"Hold on a minute," I said, "and I will take a shot at it with my camera. There, I've got it."

"Why," said he, "as quick as that?"

"As quickly as you can snap your fingers," I replied.

So on we examined and photographed four or five other lots of cells; and as soon as I can I will present you with a fair sample of cell-building, in the shape of a half-tone engraving. And so all through, Doolittle practices what he preaches.

"You have your apiary in an orchard. I believe I like that better than grapevines."

"I don't like too much shade," said Mr. D. "I have noticed that those colonies under those very heavy shade-trees do not breed up as early, or do as well as those less shaded. There are two trees" (pointing to two very densely foliaged apple-trees) "that I shall have to cut out."

About this time Mrs. Doolittle desired him to get some vegetables from the garden. In the meantime I got off upon high ground and took views of the apiary, house, and general premises. The bee-cave had "caved" in recently, on account of the moisture from the bees rotting the boards. To prevent any recurrence of such a thing, Mr. D. proposes to use flagging for roof-boards, and then cover with dirt as before.

At dinner we had one of those unconventional bee-talks, in company with another bee-keeper whose name I do not now recall, but who happened to be visiting Mr. D. at the same time; and even after dinner there were so many things to talk about that it was hard to break away.

ON THE WHEEL AGAIN.

I oiled my bicycle, fastened the camera under the seat, and was soon on my way spinning past the shores of another beautiful lake, Otisco by name. This lake, like Skaneateles, is only a short distance from Mr. Doolittle's home. After leaving the lake I wended my way to Marcellus, the home of a once prominent bee-keeper. I continued on my journey, passing teams, until I found myself back in Syracuse. I made the distance in about 3 hours. I remained in the city over night. Next morning I was in doubt as to whether I should take the train or the wheel. My next run was to be a long one, and I had thought of taking the cars to save time. As I paid my bill at the hotel the clerk told me that

A STRIKE

on the New York Central R. R. had been inaugurated during the night, and that it was doubtful whether any trains would run during the day. As far as I was concerned, I did not care much. As the depot was near at hand I went over to satisfy my curiosity. Yes, the trains were stopped, and the agents would sell no tickets to would-be passengers. The strikers were scattered here and there. A company of militia were stationed at the depot. One passenger was cursing and swearing. He had got to make an appointment, and his anger knew no bounds.

"I wish I were fixed as you are," addressing me as he saw the bicycle.

I did not stop to swear and curse with him on the event, but started across the track, and, approaching one whom I took to be a striker, said:

"Are you going to pull out to-day?"

"Guess not, sir."

"Well," said I, "*this* train of mine hasn't struck yet, and I think I'll pull out;" and with this I started toward Starkville, thanking good fortune that "strikes" don't stop *all* the wheels of progress, for my wheel at that very moment was spinning along at a rapid rate. I continued until I had gone about 30 miles. I went a little out of my way on account of imperfect directions as to the road. It being Saturday, and as I could not reach Starkville, the home of Mr. Elwood, without riding on Sunday, I concluded to ride to the next station on the Central R. R., if I could get aboard of the cars. I found that there was a *chance* of getting on a train, and fortunately was able to get to Fort Plain toward evening. Starkville, I was told, was about 9 miles from Fort Plain. As I saw the hills, some of them fully a thousand feet high, my heart sank within me.

"It is late," I said to myself, "and to go over

an unknown and lonely road among those fearful hills is not inviting."

I buckled up my courage and started; and, to my surprise, in about an hour's time I was before the door of Mr. Elwood, the man who manages successfully over 1300 colonies. The hills were not as bad as they looked, and the road was not as lonely as it seemed.

AT P. H. ELWOOD'S.

I met with a hearty welcome from our big bee-keeper—large in several senses of the word. It was a little embarrassing on my part to come upon a family I had never seen, just at supper time, Saturday night; but when I went to the hotel at Starkville I was informed that Mr. Elwood had left word that I should come straight to his home, early or late; and accordingly I turned the wheel about, and was soon shooting down (or, rather, up) the road leading to the Elwoods. Their home is situated at the base of a range of hills (I wanted to call them mountains) of anywhere from 500 to 1000 feet above the valleys. To an Ohio boy this was all new, and I feasted my eyes on the scenery to my heart's content.

The next day was Sunday. I threw off my bicycle suit, and put on ordinary civilian's clothing. As my luggage on the wheel had to be compressed into a tight bundle, my clothing, I fancy, looked as if it had been through a—well, a crimping-machine or something of that sort. I was glad to go to church with the family; and it didn't matter at all, even if their denomination was different from mine. We all love the Lord, and we differ only in unimportant details as to beliefs. I enjoyed the services, and enjoyed, also, being in a God-fearing family for the Sabbath.

The scenery about Starkville, to an Ohio boy, is grand. While the country is not really mountainous it is very hilly. From many of the higher summits the whole Mohawk Valley spreads out before you, and off in the distance the dim outline of the Green Mountains can be seen.

Mr. Elwood kindly offered to take me around the country; and accordingly, the following Monday morning, one of the bee-wagons was hitched up, and we took a ride through the surrounding country, to take in some of the sights, and of course, in the course of the day, visit bee-yards. After driving to the top of one of those high hills and taking a general survey of the Mohawk Valley and adjacent country (a magnificent view, by the way), we visited a beautiful glen where there were some very curious rock formations—caves, waterfalls, and running springs. My Kodak was in readiness, and I took a number of shots (i. e., views). Vegetable matter that remains for a few years in the water of this glen petrifies. Among the specimens we selected were almost perfect petrified beach leaves, fragments of moss, etc. It was here first that I noticed what seemed to be true of all this section of country; namely, that the basswoods seemed to grow much more thriftily than in Ohio. The leaves were enormously large. One we measured was 14 inches long, nor did this seem to be exceptional. At Mr. Doolittle's I noticed that the basswoods were of larger and better growth than with us, while on the sidehills of Starkville they were even more so. We started on our journey again, and were discussing as to whether the large-leaved basswoods were any better for honey than the smaller-leaved trees, when we drove up to the apiary of J. R. Tunnicliff, of Vanhornsville. Mr. T. owns some 400 colonies in three or four out-yards. He formerly used the ordinary hanging frame; used it faithfully for 50 years. Finally, in 1878, he adopted the closed-end frame, which he is still using. This frame, instead of *stand-*

ing upon a flat tin on the bottom of the hive, hangs in an ordinary wooden rabbit by means of a projecting headless wire nail jutting out from the top-bar. In other words, it is a hanging frame with closed-end bars. In connection he uses a wooden thumb-screw to reduce propolis accumulations. Mr. Tunnicliff was very enthusiastic over this arrangement. He declared it the best frame extant. As to the thumb-screw, he owed Mr. Heddon nothing for it, for he borrowed it of Mr. Manum, who had used it for many years before Heddon. He did not consider Mr. H. the first one to use closed-end frames in a tight-fitting box, for he had used them both in combination since 1878.

He had 400 colonies on these frames; and to show me how nicely they worked he handled several hives. They certainly did work nice, and, as Mr. T. said, he adopted them to save time in handling. The swinging frame took too much time in spacing and too much time all around. He was very enthusiastic over his hive. I took a Kodak view, and will perhaps give you a picture of it later.

SPECIAL DEPARTMENT FOR A. I. ROOT, AND HIS FRIENDS WHO LOVE TO RAISE CROPS.

That art on which a thousand millions of men are dependent for their sustenance, and two hundred millions of men expend their daily toil, must be the most important of all—the parent and precursor of all other arts. In every country, then, and at every period, the investigation of the principles on which the rational practice of this art is founded ought to have commanded the principal attention of the greatest minds.

JAMES F. W. JOHNSTON.

THE VALUE OF STRAWBERRY-PLANTS TURNED UNDER.

On the 15th day of July we plowed under a bed of Sharpless strawberries that had borne an excellent crop of fruit, and had made a prodigious growth of foliage, runners, etc. Before turning them under, however, the ground was covered with a heavy coat of stable manure. With the manure and vines together, the plowman had considerable trouble in getting them all turned under nicely. In fact, a man had to follow (with a hoe or similar tool) to push the tangled vines from under the plow-beam. When it was all turned under, however, it was harrowed and rolled until fine and compact. Then a heavy coat of ashes from our steam-boilers was put on. These ashes were mostly from coal. Considerable basswood and pine, however, goes in with the coal. In order to get out the coarser portions we run it through a sieve, or riddle, such as is used for sifting sand or gravel. These ashes were put over the surface, from one to two inches deep, and harrowed lightly into the mellow surface soil. In this we sowed, the same day, radishes, lettuce, and turnips. Well, on the 15th day of August, just thirty days from the day the seeds were put in, beautiful radishes were ready for the market—in fact, the finest I ever saw. A nice shower fell soon after the seeds were sown, and the ashes had sufficient strength to destroy all insect enemies. Not even a flea beetle punctured the first leaves of the young radishes. They grew with a rich dark green, and a rapidity I never saw them grow with before. Neither have I ever had *good-sized* radishes fit for market in just thirty days, before. The varieties were Early Frame, Chartier, and Chinese Rose. The roots were beautiful, glossy, scarlet, straight, and true. In fact, we could easily have made a bunch of Chartiers equal to the colored plates sent out by the originator. The Early Frame may have been a little ahead of the Chartier; but three days later, the Chartiers

were much the larger and finer. In three days more (thirty-three in all) we had Early Bloomsdale turnips fit for the table. They, too, were wonderfully handsome, both radishes and turnips being crisp and sweet, far beyond the ordinary. The Grand Rapids lettuce was also fit to put on the market-wagon in thirty days. Of course, it did not make large heads in that time, but the leaves were as large as one's hand, and the plants made very fine basket lettuce. How much of this is due to the strawberry-plants and how much to the manure and how much to the ashes, we can not tell; but I think just about the combination was needed for the results noted. Mr. E. C. Green, of the Ohio Experiment Station, looked them over yesterday, and he said he had never seen any thing to excel it in the way of a crop, in only thirty days. It should be remembered, that the ground was our best creek-bottom ground that had been enriched and worked over for the past four or five years.

Adjoining the above patch are some of our rows of strawberries which were also put out with the transplanting-tubes on the 15th of July. We did not think best, however, to put strawberries where strawberries had been the season before. These strawberry-plants, in 30 days have sent out runners and made little plants so that some of them are well enough rooted to bear removing from the parent plants; that is, by the aid of the tubes. Now, these few results give one a glimpse of what is possible in market-gardening, as well as in strawberry-raising. In forty days the radishes can easily be cleaned off, and another crop of something else can be turned off before winter. I am planning to transplant some of the Grand Rapids lettuce where the radishes are taken off, and thus get large heads before winter. With this high-pressure treatment, manuring, and tilth, there are quite a few crops that can be taken off the ground in forty or fifty days. *The energetic, go-ahead gardener, should have them right off promptly the very day the crops have arrived at their best, and more seeds or plants should take their place within one hour.* I know from experience that it is a very hard matter to push things like this; but I tell you, my friends, it pays.

On another piece of ground, when I saw the crop had almost reached maturity I allowed the weeds and purslain to grow for a while. It did not take the weeds more than a week or ten days to cover the ground with a wonderful growth while the crop was ripening; and just as soon as the crop was removed, weeds, tops, and all refuse matter were plowed under. In doing this, you want to be very careful that no seeds of purslain or of any thing else have become matured enough to grow; for if you do not, you will seed the ground with weeds. Keep your eye carefully on the weeds, and a good many times you can have a heavy growth to turn under, almost as well as not. Be careful, also, that this heavy growth does not take any thing from the maturing crop. A great many times it is better to wait a little until the crop is mature enough to be gathered, rather than to undertake to clean out the patch from weeds, etc., just before maturity. In fact, the nicest way in the world to make *sure* with purslain is to turn it under out of sight. Keep the cultivator going, however, so that no chance sprig stuck up through the dirt shall get on top of the ground and grow again. At this season of the year (Aug. 21), if any piece of ground, enriched as we have ours, is left idle for a week or ten days, the weeds will make their appearance. I would rather have the Acme cultivator go over the ground, say once in five or six days, if we can manage to have it.

GARDENING FOR SEPTEMBER.

During this month is the time to put out cabbage - seed for cold - frames. The Jersey Wakefield is the only kind we use for this purpose. Sow the seed in good rich soil, rather thinly, so as to get nice plants. When the leaves are as large, say, as a half-dollar, they are ready to transplant to cold-frames. I always enjoy this kind of gardening in the fall of the year. It looks nice to see these plants, so fruitful and bright and fresh, just when frost is ruining so many other things. If you have not put out your spinach yet for over winter, now is a good time to sow it. Corn salad can be put in at the same time, and both may be transplanted to cold-frames for use during winter. Now is a good time to sow Grand Rapids lettuce seed in view of having lettuce for Thanksgiving. In cities, nice crisp lettuce at Thanksgiving has got to be quite the fashion. Now, we are quite willing that people should follow the fashions just as far as they like, providing it runs into nice garden vegetables. Winter onions can be put out now tip-top. It is too late to sow turnips; but if you have ground in nice order, and turnips that need thinning out, you can get very nice ones by transplanting. One season we raised nearly a hundred bushels of turnips by transplanting them into cucumber ground after the frost had killed the cucumbers.

COLE'S NEW AGRICULTURE AT THE PRESENT TIME.

In excavating for our new building, it became necessary to go right down through the reservoirs of the new agriculture. Now, as you may know, I have been somewhat disappointed in the working of the reservoirs that cost so much money. A good many plants do not seem to do very much better over these reservoirs than anywhere else. But I have every year noticed this: After we get through with them, and they are abandoned on account of the lateness of the season, squash and melon vines are sure to spring up and grow with unusual luxuriance. This year a single squash-vine was growing with a rapidity, right under the glass, subject to the intense heat of the sun, that I rarely if ever have seen equaled. Although it had no water at all, and the top of the ground was intensely hot and dry, this vine scarcely wilted under the midday sun. Well, when we came to dig down through, although it was a very dry spell, we found the reservoir full of water, and the roots of the squash were down and spread out in the water. They had gone through at least 4 feet of earth, and then between the loose stones, to find water. This vine has now 13 great Boston Marrow squashes, and is still growing at a tremendous rate. A single banana muskmelon-vine near by has now covered perhaps an area of 10 feet square, and 7 great melons lie almost touching each other. When Father Cole spoke about having the reservoirs 6 feet deep, I thought he was down altogether too low; but I now discover it is not a bit too low for certain kinds of vegetation; and, furthermore, that at this depth the reservoirs in the clay soil will keep constantly filled with water; that is, if made with the overflow so as to keep just two feet of water in the bottom. It looks funny to see such rank vegetation growing up through a soil parched with intense heat, and as dry as dust.

GETTING STRAWBERRIES FROM RUNNERS BEFORE THEY ARE ROOTED.

One suggestion in respect to strawberry-plants. It is almost always so dry here that we can not get any plants, and I have wished there might be some way to do so. About two weeks

ago I cut a lot of runners and put them in a 4-inch soap-box near the well, and they are doing nicely. Why would not this be better for some of us than taking up the plant, as you suggested in Aug. 1 issue?

S. T. WALKER.

Forest Grove, Or., Aug. 11.

Friend W., your plan is already in use. By shading the ground and keeping it constantly wet, you can make the buds start before they show any root at all. This, however, requires considerable care and skill. After very small roots have formed, they may be put out in beds. By keeping them watered and shaded you will very soon get nice plants. You do not say that you watered them often, but we infer this from your expression of putting them near the well. The advantage over setting at once in the field is, you can put a good many plants in a small bed of very rich ground. After they get strong roots they can then be put out in the field.

STRAWBERRY-PLANTS FOR THE GARDEN: HOW CLOSE CAN THEY BE PUT?

I want to plant a small strawberry-patch for family use, about 30 by 40. How close can I plant them? I will fertilize them well. How will it do to mulch them with fine straw so deeply that not a weed can show its head?

L. A. DUGGAN.

Cuthbert, Ga., Aug. 21, 1890.

Terry, in his strawberry book, directs to thin the plants out in the fall, so that none of them shall be nearer to each other than 6 inches. From this I gather that, where ground is valuable, plants may be set in the fall as near as 6 inches, leaving a path one foot wide between beds 3 feet wide. When put so close, however, you would need to keep off every runner; then mulch the beds with cut straw, and the paths with long straw, and you will have pretty nearly the Terry system.

WINDMILLS AND TANKS: SOME SUGGESTIONS.

I am thinking of having a windmill and tank. I see from GLEANINGS that you have one of each, and I desire, if you please, to have your opinion as to the kind that is best; and is there any solution of the difficulty with wooden tanks, that, if they get even partly empty, in a short time the upper portion of the staves shrinks, and they leak when the water is pumped in again? Do you find that to be a drawback?

E. CALVERT.

Nashville, Tenn., Aug. 12.

Friend C., almost any of the windmills advertised in our agricultural papers, made by responsible men of good standing, will answer your purpose. The first one we bought was the Eureka, made by Smith & Woodward, Kalamazoo, Mich. Our larger one is the Eclipse, made by Fairbanks, Morse & Co., Cleveland, O. During a very dry spell this summer, when there were several days that no wind blew, our big tank did get a little dry around the top; and when a brisk wind came up suddenly I noticed the water coming through the cracks so as to run a small stream in several places. This was on the south side, where the sun struck the staves. As soon as the sun went down, however, the leaking was reduced to

drops, and by the next morning there was not a single drop. If the tub is properly put up, and the hoops drawn up with appropriate bolts, I think there will be no trouble. Don't drive the hoops to get them tight. Have them drawn up with good heavy bolts.

REPORTS ENCOURAGING.

120 LBS. FROM ONE COLONY.

I took off 120 lbs. of comb honey from one swarm last season up to August 31.
Winfred, S. Dak., July 22. J. W. CHAPIN.

A GOOD REPORT FROM CALIFORNIA.

The flow of honey is good here now. I get from 1000 to 1200 lbs. each week from 180 colonies. My crop will be from 8 to 10 tons this year.
Armona, Cal., Aug. 19. G. W. CAMP.

15,000 LBS. FROM 200 COLONIES.

I have taken this season from 200 stands, 15,000 lbs. honey, principally extracted.
Riverside, Cal., Aug. 19. L. SARLES.

FROM 39 TO 100. AND 3000 LBS. OF HONEY.

I have taken 3000 lbs. of extracted honey from my bees this year, all white clover—the nicest honey I ever got. I had 39 colonies, spring count; increased to 100.

FRANK M. JONES.

Buffalo, N. Y., Aug. 2, 1890.

15,000 LBS. FROM 80 COLONIES.

I am working about 80 swarms for section honey, and it looks as if I would make pretty near 15,000 sections (1 lb). The bees are working well now, and have been working in the sections since the last of March. I am working about 15 swarms for extracting; they are doing well.
A. B. MELLEN.

Acton, Cal., July 25.

198 LBS. FROM ONE COLONY.

I began this spring with 15 swarms, and now have 30, and have taken nearly 2000 lbs. of honey up to the 9th inst. From one hive I have taken 198 lbs.; beginning to extract July 1, 60 lbs.; July 11, 40 lbs.; July 22, 33 lbs.; July 30, 37 lbs.; Aug. 9, 28 lbs.
E. STEVENSON.

Salt Lake City, Utah, Aug. 11.

A GOOD REPORT FROM NEW JERSEY.

I have taken GLEANINGS since last February, and in that time I have not seen any thing in it from New Jersey. I see it stated in your last issue that the honey crop would be short. Well, I have some bees here. They are Italians and albinos, and I have one of Siberian. They have done very well so far this season. Some of my swarms have made over 100 lbs. this season, and none less than 50 lbs. We had no swarms in May this year in this part of the State, that I can hear of. Our white clover has been a good crop. It ran about six weeks, and now our fall flowers are coming out, with prospects of a fair crop. I have four swarms from three last year's colonies, and I had to use a bushel basket to take them from the tree in, and they filled it within two inches of full, which is the largest swarm in South Jersey, that I can hear of. One swarm of albinos swarmed twice; second swarm not so large as the first. My Italians have swarmed but once this season. Our bees in this section have been carrying pollen since last Christmas. The man I got my bees of has

been in the business, or had bees, for 16 years, and this year, he says, beats all he has seen for work. Bees do not swarm this year until they fill their hive, pound sections and all. We do not extract any honey here, but all pound sections is what we want. It brings a fair price. There are some black bees in this section, and we are trying to get rid of them, which will be a good thing if we succeed. There are not many here that keep more than ten colonies over winter, but I intend to see what can be done here with the little workers. I intend to have about 75 colonies, and then I can tell what there is in the business here. I think I am on the right road to make it pay here.

Vineland, N. J., Aug. 11.

L. S. JONES.

REPORTS DISCOURAGING.

The honey crop is very short, one-fourth of what we had last year.
Boscobel, Wis., Aug. 20, 1890. AUSTIN DEXTER.

If bees in our part of Nebraska get enough honey to winter on they and their owners will be in the biggest kind of luck. So far they have not got one quarter enough.

Dorchester, Neb., Aug. 17. C. F. THOMAS.

Honey crop a failure this year with us. I don't think we shall have over 500 lbs. of honey from 200 colonies, spring count.

RANDALL & SEARES.

Girard, Pa., Aug. 18, 1890.

Our honey harvest this year so far is very poor. Basswood not a quarter of last year's crop. Clover is worse, if any thing. We have a very poor show in Fayette County, for 1890.

A. F. RANDALL.

Randall, Ia., Aug. 1, 1890.

The honey crop here is a complete failure. I shall not take 50 lbs. from 50 hives. My neighbor, who has 180 hives, has not taken a pound. What is the matter? Only 8 new swarms, and some of them weak.

W. F. COBB.

Mona, Ia., Aug. 16, 1890.

No honey. New swarms would have starved if they had not been fed, and old ones made only about enough to carry them through the dry spell, which has recently closed by reason of plenteous rains. We had to feed cattle and horses through July and the fore part of August, just as we would in winter. Pastures and meadows are all burned up. We had very few swarms of bees, and scarcely any use for the goods we got of you this year. We lost many bees and plants which were growing finely when the dry weather set in.

W. H. COMBS.

Marceline, Mo., Aug. 21.

Bees have done very poorly this year, but are working in buckwheat very fast now. I have one hive which I have extracted 104½ lbs. of honey from. This is more than double the quantity any other hive gave. These are pure Italians, dark leather-colored ones, very gentle. If this hive has not a honey queen, what one has? I have 43 hives of nice bees now. They have done very poorly in this locality this year; no swarming to speak of. I should no more think of going without GLEANINGS than I would without bees. As I am a young man, only 22, I have a great desire to settle in Colorado and run the business to its full capacity.

EDGAR BRIGGS.

Manchester Bridge, N. Y., Aug. 11, 1890.

MYSELF AND MY NEIGHBORS.

I pray not that thou shouldest take them out of the world, but that thou shouldest keep them from the evil.—JOHN 17:15.

While I write, an east and west railroad is building through our town; and yesterday 22 teams and 30 or 40 men were employed in making a cut through our own grounds. As this cut is from 2 to 12 feet in depth, it has required quite a force of men for about two weeks; and during these two weeks it has been my privilege to get pretty well acquainted with the average gang of railroad employers and employees, with their horse teams and mule teams, with their plows and scrapers, their pick-axes, and necessary adjuncts for camping out along the line. There is, I need not tell you, a general prejudice against this class of people. Many look down upon them; and perhaps a good many who take their ease and wear fine clothes say in their hearts as they look down upon them as they work in the deep cuts going through the hills, something as the Pharisee said in the parable: "God, I thank thee I am not as"—these men who have to work in the dirt to earn their daily bread. I know this is not the prevailing feeling in all hearts, for most good people look upon these friends as the pioneers, or those who go before and prepare the way for this great machinery of traffic and commerce. Great crowds of town people come down and gaze upon the ruin this railroad has made through my market-garden. The finest crop of bush lima beans is right in its pathway, and they would have been ready to pick in a week or ten days. But the men and teams could not wait. One of the finest patches of Ford's Early corn I have ever raised was also right in the pathway, and this would have been fit to pick in a week. But it had to go. When people expressed sympathy, and said it was too bad, I told them that we were glad to remove the garden-stuff for something so much better.

"Why, do you consider the railroad so much better than a garden?"

I have explained the matter so much that I fairly get tired of talking it over. To be sure, I consider the railroad better than a garden, or else I would not have given \$2500 to have them come through. Not only this, I gave them a strip of ground right through the center of our grounds, that was worth to me, under the circumstances, nearly if not quite \$2500 more. For six months back I have been expecting the work; and while I have been anxious to see them, there has been at the same time a feeling of dread. In some way, from what I had heard I had got an idea that the railroad-construction folks were a class of people without hearts or souls; but in some respects I have been agreeably disappointed. The chief engineer and the surveyors are very nice people, indeed. In fact, some of them are boys who graduated from our own town. The chief engineer kindly consented to spare my carp-pond, although the right-of-way line went right through the middle of it; and they also arranged so as to save my fruit-trees. Not one had to be cut down or removed. In Ernest's absence I fear I neglected business somewhat, in order that I might improve the opportunity to get as well acquainted as possible with these people who carry the lines of progress in their hands. It was two weeks ago this morning (to-day is the 27th) since they commenced. I had just finished my breakfast. We had read our Bible-lesson, and I had prayed for grace and strength to take up whatever trials the day might bring. As I passed down the walk toward the factory I

knew there might be trials in store for me, greater than I expected, but I was glad that I did *not* know what they were. Before I reached the factory, however, one of the boys said, "The railroaders, with a great string of plows, scrapers, and other tools, are marching down to your garden."

I made a short cut, found the boss, and told him that, while every thing was at his disposal, I should be very glad if he would help me a little in protecting my crops, and also asked of him the privilege of removing the surface soil before they commenced their excavations. In a few minutes he surprised me by his hearty good will and emphatic directions to the teamsters.

"Why, Mr. Root, we will do every thing we can to avoid unnecessary damage to your stuff; and as to the surface soil, if you will stay here and boss it we will remove it for you."

From that moment pleasant relations have been kept up until the present time. May be you begin to wonder why I go into all these details about something comparatively unimportant. Perhaps you wonder what it has to do with the text. Just this: I knew by past experience, that, as soon as the men got well at work, cursing and swearing would be the order of the day, and I was not mistaken. I had resolved to be with the men in the outset, and get acquainted with as many of them as possible; and I wanted, if I could, to manage to remonstrate at the first oath that was uttered. I think I did, and for some time I was greatly encouraged to see how pleasantly they agreed with me, and gave me a sort of half promise not to swear, even if things did go wrong. It was not very long, however, before some pretty loud calls came from the factory and different parts of the grounds. I could not give my whole time to the new railroad. Before the men got thirsty I showed them my little spring, and got one of our boys to carry around water, with a dipper and pail. I lent them an ax and hatchet, a chain and a pick, and a shovel; and I kept men near by to assist them. I turned the cow and the pony outdoors, and let the men have the use of the cow-barn to stable their horses; and I succeeded without difficulty in winning their friendliness and good will. But, alas! it seemed like a drop in the bucket to attempt in my own feeble strength to teach men that a railroad could be built without cursing the God who made them. The scraper we brought on the grounds to remove the surface soil was rather small for a big team, and not exactly the right shape. The boss suggested right away that we could have one of his if we would have a little repairing done on it. Our blacksmith soon did the repairing, and, in fact, we have had quite a trade in repairing their tools for them right along. When I took their scraper I removed their clevis, as we had one of our own. That it might not annoy anybody, I hung it on a stake. Somebody else took it and laid it in one of the wagons. Finally somebody drove his team up to the scraper to hitch on. The clevis was missing. By the way, dear friends, have you ever had any experience in the amount of swearing that has been called forth by the loss of a clevis? We do not swear here on our own grounds, but I have been sorely vexed many times, to find the team away off in the lots, the plow or harrow all in readiness, doubletrees on hand, and no clevis. On this account we have a lot of them hung up in a special place in the tool-house. Well, this man began to swear about the delay, and then he cursed the one who took the clevis away. By this time I was right before him, with my hat off.

"Look here, my dear friend, it was I who took that clevis. I hung it on that stake, in

plain sight, but somebody else has taken it since then. Now, please do not swear this bright beautiful morning. Before night we shall have many other trials and vexations. Wouldn't it be a great deal better to take every thing coolly and patiently? You know that the Bible says, 'He that ruleth his own spirit is greater than he that taketh a city.'" He softened down, and laughed a little. By the time the man who put the clevis in the wagon had fetched it he was disarmed, and the victory was mine for the time being. Oh how I do love *such* victories! I like to come out ahead in any thing. When I used to fight by my own strength I would almost die rather than to be whipped, especially is I felt that my cause was right and just. But, how much better—how grand and glorious it is to conquer through the spirit of Christ Jesus*—to win by gentle words and by love; to catch a kindly and pleasant look from their countenances; to make them smile when they have been under the influences of an evil temper! How that little prayer wells up from my heart, "Lord, help! Lord, help!" as I think of these battles! By this time the boss was a very good friend of mine. He had not used a bad word in my presence, and I began to hope he would help me. But pretty soon I came up to him behind his back. He was swearing terribly at the awkwardness of some of the green teamsters. A crowd was around him, and there was a regular din—yelling at the horses, calling others to get out of the way, and cursing the stupidity of somebody else. It seemed almost out of place to interfere. But something had to be done, or I must give up the field. I hardly had time to breathe my little prayer. I did the best I could, but he did not take it very graciously. He muttered something about circumstances justifying extreme measures. I saw I had lost my hold on him. In the afternoon, however, he asked me who owned the lot adjoining, where they were to work next. I told him, and then he added:

"Mr. Root, I wish that lot belonged to *you*. In all my experience in my life of railroad building, I have never before found a man like you. I have never found a man before who seemed to think that we railroaders are human. Why, if I had you to deal with, a great part of my troubles would be nothing. You seemed glad to have us here in the first place; whereas everybody else regards us as enemies, and tries to beat us and come some game on us continually. Now, if there is any thing you want us to do, or any privilege we can grant you, just name it and we are at your service."

Pretty soon the contractor came around. He had a couple of ponies and a carriage. The boss and the contractor, of course, had quite a talk about the progress of the work—the prices they paid, etc. The contractor is a swearing man too, but his remarkable friendliness showed that the boss had made a good report in my behalf. I wanted a roadway on top of the heap of dirt, on their own ground. I asked if it would discommode them. The contractor replied, "Why, bless your heart, Mr. Root, why didn't you speak about it sooner? I would have had the men lay the dirt all in order for you. It is most entirely at your service; and when you want any privilege of the kind, do not be at all bashful—just talk right out, and give us a chance to show you that we appreciate the many kind favors you have shown us since we have come on to your grounds."

Now, friends, how much are such things worth from these officers and men in charge of our great railways? Don't you believe it will

really pay to invest a few dollars in showing that you are liberal-minded, and disposed to be brotherly and human? Before they came here, different ones told me that the gang would steal every thing in the neighborhood. They said our garden-stuff would be literally cleaned out. Well, just across from our spring is a row of extra-early watermelons. They were just getting ripe when the railroad came. I supposed that I should lose some if not all of them. By and by, when picking a lot for the market-wagon, my path lay right through these men at work. Shall I tempt them by letting them see the nice melons, and that they are already ripe? or shall I take them some round-about way to escape observation? The melons were pretty heavy, and I decided to wheel them right through the crowd. There was some joking as I passed by; but, dear friends, it really does my heart good to be able to say that not a thing in the shape of vegetables or eatables has been touched since these men came into our neighborhood. I have watched the melons there, and they have remained till fully ripe. One day the pony went to one of their wagons and ate up a peck of their potatoes that are worth \$1.20 a bushel. It was Sunday morning, and the campers had no means of buying any more. I told them to go into the garden right close to their camp and dig as many potatoes as the pony ate. But they declared it was their own carelessness, and I think not a potato was taken. Please do not think I am boasting of my skill in such matters. I boast not of myself, but of Christ Jesus. Paul says, "Yea, of myself I will not glory but in mine infirmities." I am glad to witness and testify to the power of the spirit of Christ Jesus, even amid the din and clamor of ungodly men.

I now want to speak of a subject that lies very close to my heart during the time of this matter of railroad-building: It is, cruelty to the mules and horses that construct our railways. And, dear friends, I have just made a discovery. The discovery is this: The key to most if not the cause of all the cruelty shown to horses lies in profanity. Profane swearing is at the root of the whole matter. One teamster gets mad and begins to curse his team. Another one takes it up, and by and by a dozen teamsters are striving to *outdo* each other in horrid oaths and curses. Then the whip begins to be used, and finally clubs; and these poor over-worked dumb friends of ours are urged beyond reason, when if the oaths and curses could have been stopped they would have worked reasonably and not beyond their strength. I wonder that those who own the teams do not see this. Now, I do not know how many of the readers of GLEANINGS are in the habit of swearing; but the idea may be new to you, that it costs you money every time you take God's name in vain. The money is a small part of what it costs, but it is a point where great corporations may be appealed to if no other. Where their pocket-books suffer, they are interested. I may as well tell you that I had to give up, mostly, trying to stop the swearing. When they had only four or five teams there was not any of it when I was in sight; but when it came to 20 or 30, where they were backed up by numbers, some of them seemed really to take a kind of pleasure in letting me know that I was whipped out. Oh, but I am not whipped out, dear friends! If you will not listen to my words, the great God above will hear my prayers. I *know* there is a time coming when railroads shall be built without swearing. Yes, I feel pretty sure there are godly contractors and bosses who are doing this very thing now; and I expect to hear some of the readers tell me of instances where it has been done. The horses would do more work,

*Not by might nor by power, but by my Spirit, saith the Lord of hosts.—ZECH. 4:6.

and the men would do more work, and God's blessing would follow in every department of railroad work if it does not follow now. Accidents and loss of life would be averted, and the peace of mind that follows a conscience at peace with its Maker would give an enjoyment that is worth more than all else in this world besides.*

On account of the Sunday-school picnic to be held to-day, our regular weekly Thursday evening meeting of the Endeavor society was changed to last evening. This appointment was made without considering that the last Wednesday evening of every month is the regular time for a union prayer-meeting of all the churches of Medina. It was not discovered until it was too late to have either of the appointments changed, and therefore part of us must go to one meeting and part to another. Toward the close of the Endeavor meeting, however, I suggested that we adjourn and all go over to the union prayer-meeting at the Disciple church. By the way, there is something fresh and reviving about the Disciples and the Disciple church. I have sometimes thought that their services were a little more in the line of every-day experiences than most of the other churches; and their hymns, some way, seem to wake one up, and give him a feeling of enthusiasm that he does not always find. You know, of course, without my telling you, that I am an earnest advocate of union meetings. "By this shall ye be known of all men that ye have love one to another." If our churches could not act in accordance with the above, what a sad thing it would be! So many were coming in toward the close of the meeting, the leader was again induced to mention the subject. It was something like this: The way to get good ourselves is to be busy doing good to others. I told the friends briefly of my experience in fighting profanity among the railroaders. The leader remarked that it was demoralizing, and almost dangerous, to hear such constant blasphemy. By the way, here is a point I have not emphasized. I know by experience that it is terribly demoralizing to be obliged to be present where such talk is going on. Why, I am really ashamed to confess that, after the conflicts I have been telling you of, sometimes, when tired out and sorely vexed at something, these foul words intrude themselves upon my thoughts, and I can hardly resist the temptation of thinking how some of those horrid oaths would fit under peculiarly trying circumstances. Unless you are fortified by constant and earnest prayer, and unless you fight with all your might and mental strength against it, your peace of mind will be in danger by simply being obliged to *hear* such blasphemy. Somebody suggested that our Medina boys, many of them unused to such talk, were obliged to hear it. And another suggested that the contagion had already got into our streets, and was possibly keeping away young converts from the regular appointed meetings. Then came up the subject of our text: Shall we be more pure in heart by keeping away from these places, and closing our ears to what is going on? Then suggestions came, that I should keep on laboring among these people, while others should stay away. The meeting was prolonged beyond the

usual closing hour. The real point of our text was the matter under discussion: Shall we go right into the clamor and turmoil and wickedness of the great business world, or shall we keep ourselves pure in heart by holding aloof? The answer that comes to me is something like this: The one who goes among these men and undertakes this work should be fortified and clad in the Christian armor, by an honest and sincere purpose to do these men good, and he should be fortified by earnest prayer in his closet by himself. He should go with the love of God filling his heart to overflowing; and he should pray meanwhile to be kept from Satan's strange power over those who even *hear* blasphemy against God. Unless one has this preparation he should keep away from scenes of this kind as much as possible. To go out of idle curiosity, and because one has heard of their goings-on, is dangerous; but to shirk duty, or to neglect *necessary business*, because we are thrown in contact with such scenes, would be folly. God's grace is amply sufficient to sustain his devoted followers through any such trial. I have told you of my many off-recurring temptations. Now, when I am engaged in revival work—when I am pleading for souls—then my heart is filled with that gift of the Holy Spirit which is so abundantly promised, and I am out of danger. Satan's old temptations and allurements sink into nothingness. And right here lies the secret of being delivered, I think, all at once from the great besetting sins. When the heart is full of love to Christ, Satan can find no lodging-place, and can make no headway. At just this point in our meeting, when I was praying that God might put into my heart some of these bright promises in the shape of a pertinent text, the organist, who is one of the leaders in the Endeavor society of the Disciple church, suggested the old familiar hymn,

"Am I a soldier of the cross?"

All at once it was taken up as the audience realized that here was the true solution of our discussion, and the plain and unmistakable hand of God pointing us to duty. As I look over the words I discover they were written by Dr. Isaac Watts in 1720. The tune, Mount Pisgah, was one I have heard my father sing over and over again, away back in the days of childhood. Memory came rushing fast as I listened. My poor old father, as I well remember, was sorely beset at times by Satan; and the reason why he loved these words was because they came to him bidding him gird up his loins and *bear* the cross. Here are the words; and I am also happy to be able to give you the "air" of the music. This was engraved specially for the occasion by one of our own people. The plan is one of his own originating:



Am I a soldier of the cross—
A foll'wer of the Lamb,—
And shall I fear to own his cause,
Or blush to speak his name?

Must I be carried to the skies
On flowery beds of ease,
While others fought to win the prize,
And sailed through bloody seas?

*The time has come sooner than I expected. Since the above was put in type, I am told that in the neighboring town of Lodi, this county, there is a gang of men and teams with a boss who is a Christian man. This boss told them, when they hired out, that there was to be absolutely no swearing. The gang is doing excellent work, and there has been no trouble in keeping out bad words entirely. They simply *started right*, with a Christian man to watch over them. May God be praised for it.

Are there no foes for me to face?
Must I not stem the flood?
Is this vile world a friend to grace,
To help me on to God?

Since I must fight if I would reign,
Increase my courage, Lord;
I'll bear the toil, endure the pain,
Supported by Thy word.

Now, if you have not learned this good old tune, please do so. If you are afraid to sing around other folks, go off in the lots and sing it by yourself until it brings the blessing to your heart it has brought to mine. Then sing it to your friends. Do not be bashful or backward. Be a *brave* soldier. A simple little hymn like this, sung in your own way, and after your own fashion, will have a power you have no conception of, if you *sing* for *Christ Jesus*. Use the hymn to vary the usual plan of asking a blessing at the table. Get mamma to sing, and the little ones, and afterward explain to them what it means to be "a soldier of the cross, a follower of the Lamb." Tell them that good *soldiers* do not get mad and swear, nor quarrel, nor speak bad about their neighbors. Tell the boys that, if they want to be *manly*, they must get up and *work*, and not be *carried* about. Tell them that we want men now to *fight* for God and the *right*, as *we* never wanted them before. Tell them that, before they can be *bosses*, or have *command* anywhere, they must learn to rule their own spirits. Tell them this hymn was written more than 170 years ago by the same good man who composed the little verse commencing,

"How doth the little busy bee
Improve each shining hour!"

Tell them it is the hymn that is making Uncle Amos happy just now as he fights his battles and takes up his burdens. Tell the boys that Uncle Amos is praying for *them*. And that they may fight against this sin of our national profanity and irreverence to God, bid them be *brave* soldiers in the battle for the right, and tell them it was Christ Jesus who prayed, *not* that they should be taken out of the world, but that they should be kept from the evil.

TOBACCO COLUMN.

CONDITIONS UNDER WHICH WE GIVE SMOKERS TO PERSONS WHO STOP USING TOBACCO.

First, the candidate must be one of those who have given up tobacco in consequence of what he has seen and read in this department. Second, he promises to pay for the smoker should he ever resume the use of tobacco in any form, after receiving the smoker. Third, he must be a subscriber to GLEANINGS. Any subscriber may, however, have smokers sent to neighbors or personal acquaintances whom he has labored with on the matter of tobacco-using, providing he give us his pledge that, if the one who receives the smoker ever uses tobacco again, he (the subscriber) will pay for the smoker. The one who receives the smoker in this case need not be a subscriber to GLEANINGS, though we greatly prefer that he be one, because we think he would be strengthened by reading the testimonials from time to time in regard to this matter. The full name and address of every one who makes the promise must be furnished for publication.

HAS QUIT, AND EXPECTS TO STAY QUIT.

I believe I am entitled to one of your smokers, as I have used tobacco ever since I was eight years old. I was thirty-eight last Friday. I quit last January, and still expect to hold on.
Lewistown, Mo., July 28. H. MANSFELDER.

A NEW SUBSCRIBER QUILTS THE USE OF TOBACCO.

Mr. E. L. Yarbrough, of Buffalo, Dallas Co., Mo., desires you to send him GLEANINGS. He has abandoned the use of tobacco, and desires you to send him one Clark's smoker. He says he will pay for it if he ever uses the weed again.
Bolivar, Mo., May 19. A. J. LOWER.

A SMOKER FOR A FRIEND.

I want you to send a smoker to me to give to brother Cook. He has quit the use of tobacco. He used it over 45 years. He is a good man, and class-leader too. I will pay if he begins using it again.
Camden, N. Y., July 22. A. C. BURNAM.

A USER FOR 20 YEARS QUILTS.

In consequence of what I have seen and read in this department, I determined to stop using tobacco, which I have used for 20 years. I gratefully promise to pay for the smoker should I ever resume the use of tobacco in any form, after receiving the smoker.

Mikado, Mich., June 16. WM. R. CUMMINGS.

TWO SONS-IN-LAW WHO HAVE QUIT TOBACCO.

If you still give smokers to those who quit the use of tobacco you can send one each to Willie Godbold and Ralph Watson, both of Bowerton, Copiah County, Miss. They are both my sons-in-law; and if they ever use tobacco again I will pay for the smoker myself.

Bowerton, Miss., May 12. WM. BOLES.

SNUFF-DIPPING AMONG THE COLORED WOMEN.

I see in the Tobacco Column that a lady has quit smoking. I wish that by some means the ladies of this section could be induced to quit the very disgusting habit of snuff-dipping, which is so prevalent here among both white and black women, and thereby elevate them considerably in the estimation of many good people.

Tuscaloosa, Ala., July 21. S. F. HERMAN.

Dear friend H., I have heard a good deal about the snuff-dipping habit; and I should be very glad indeed if something could be done to awaken and rouse up these sisters to a sense of what they are doing.

A SMOKER FOR A FATHER WHO HAS QUIT.

I am very glad that I am able to ask you for a smoker, as it is just what we need. My father has quit using tobacco, and says if he ever uses it again he will pay you for the smoker, and give you all our bees, which are fourteen nice colonies. I don't think you will get the bees. Please send it to John Woods, Ayr, Adams Co., Nebraska.

Ayr, Neb., July 28. CORA WOODS.

THROWS THE OLD PIPE AWAY.

I will throw my old pipe away if you will send me a smoker, and I will not use the pipe again as long as my name is Mary. I can use rags cheaper than tobacco. If you ever hear of my using the pipe I will pay you for two smokers.

Mrs. MARY. A. MORROW.

Stromsburg, Polk Co., Neb., July 21.

We suppose, friend M., that by throwing away the old pipe you mean not to use tobacco in *any* form, and so we sent the smoker.

A SMOKER FOR AN ORPHAN BOY.

Three months ago I quit the use of tobacco through the influence of GLEANINGS. I do not need a smoker, as I have one; but if you wish to send one I will give it to an orphan boy to whom I have given a colony of bees; and if I ever resume the use of tobacco I will pay for the smoker.

J. B. ALEXANDER.

Hartford City, Ind., Aug. 7.

We take pleasure in sending the smoker for the orphan boy. We hope the boy will be informed of the circumstances, and never use tobacco himself.

EDITORIAL.

Thou therefore endure hardness, as a good soldier of Jesus Christ.—II. TIM. 2:3.

GLEANINGS' NEW DRESS.

FOR fear you might not have noticed it otherwise, we call attention to our brand-new type and our "bigger" and plainer letters. How do you like it?

PROFANITY.

ARE any of the readers of GLEANINGS railroad men? If so, do you have swearing at your daily work? and won't you lend a hand in this battle for the right?

ERNEST'S RETURN.

ERNEST drops in upon us just as we go to press, Sept. 1. and his father is very glad to see him, and quite willing to turn over to him his share of the editorial burdens.

THE HAVERLAND STRAWBERRY.

It has turned out somewhat as I expected. The tremendous demand for the Haverland plants has run almost every plant-grower into a corner. Our own stock is just exhausted, but we have found a place away off in New Jersey where we are told they can be bought. Before using them to fill orders, however, we shall set them in our plant-beds and wait until they have made good new roots, so your Haverlands may be delayed a couple of weeks. All the others will go as usual by the first mail. By the way, if any of the readers of GLEANINGS have any of the Haverlands for sale, will they please tell us how many they can furnish and at what price?

ADVERTISING THAT DID NOT PAY.

JUST two more report that their advertisement did not bring them a customer. One is H. L. Fisher, of Milford, Ind., who advertised three-frame nuclei for \$2.25 each, in May and June. He paid us \$3.50 for the advertisement; but as it brought him no customer we return him the money. The other was T. L. Thomson, of Blairsville, Pa. He advertised bees at \$4.00 per colony. As he made no sales we returned his \$1.20. There is another fact that begins to come out here, friends; and that is, that a new comer in the advertising field is not as likely to receive orders as somebody with whom the people have become somewhat acquainted; therefore there is an advantage, to a certain extent, in getting people familiar with your name and address.

THE STRAWBERRY, AND ITS ADAPTIBILITY FOR INTERESTING INVALIDS, AND KEEPING THEM IN THE OPEN AIR.

I do not know of any other plant that grows that one can work with, propagate, and see grow almost every month, when the ground is not frozen, like the strawberry. As cold weather comes on, confine your operations to a piece of ground protected by hills or buildings, or

both; and if you still wish to have them make runners and start plants, cover your bed, or a portion of it, with sash, when the frost is severe. Whenever the weather moderates so as to enable you to move the sash safely, do so; and whenever it rains, the sash are better off than on. By taking pains you can see them thrive almost all the year round, and you will have your reward in getting fruit a month earlier than those not protected. Of course, by the aid of artificial heat you can make them bear fruit in the winter time; but this is a more difficult operation.

QUEENLESS COLONIES IN SEPTEMBER.

THIS month and the next are the ones during which the average novice gets frightened because he can not find eggs or brood in the hive. In many localities the queens become so small and insignificant after they stop laying, that they are difficult to find; therefore the beginner sometimes even orders queens when every thing is all right and no queens are needed at all. Where honey is coming from fall pasturage, of course queens keep right on laying; and if you want your bees to raise brood this month, you can easily start them by daily feeding in small quantities. If the colonies are already populous, and have plenty of stores to winter them over, I do not believe it will pay to feed. If feeding is to be done, however, and no honey is coming in, I would do all the feeding during this present month, so that it may be well ripened and sealed up before cold weather comes on.

A VISIT FROM THE EDITOR OF THE AMERICAN BEE JOURNAL.

LAST Saturday morning, Aug. 23, while dictating matter for GLEANINGS, I was agreeably surprised to see the genial face of our co-worker, Mr. T. G. Newman, editor of the *American Bee Journal*. He remained with us only a few hours, but they were very pleasant hours, I assure you. We felt sorry to have our friend see so much disorder all about us, consequent upon the new railroad and the new building, but I presume he knows how to make allowances. It was a privilege to us all to have him occupy the time and take charge of our noon meeting; and, by the way, every time I think of it, it gives me a new thrill of joy when I think what a grand thing it is to have such pleasant and brotherly relations between the editors of at least two of our prominent bee-journals. By the way, why *shouldn't* editors visit each other, compare notes, and find out how and by what means they may assist each other? Just contrast for a moment the effect it would have on our nation to see such a feeling among the editors of our land, especially editors who conduct what might be called rival journals, and in fields perhaps already overworked. The Bible says, "Give, and it shall be given unto you;" but Satan whispers, "You want to be constantly on the lookout lest somebody overstep a little

on your domain;" and then he urges, "An eye for an eye, and a tooth for a tooth." O dear friends, shall we not hold fast to the teachings of the Bible? I hope every member of our establishment will remember that, inasmuch as friend Newman's voice has (at least *once*) been heard in prayer at our noonday service, his name, and that of the journal he represents, may for all time to come be held by us all in reverence and respect long after the present editors have been gathered to their eternal home.

SPECIAL NOTICES.

TERRY'S BOOK ON STRAWBERRIES.

We expect this to be ready to mail within three or four days. I think it will pay every strawberry-grower who has a bed of fifty plants or more. The price is 35 cts.; by mail, 40.

GRAND RAPIDS LETTUCE SEED WANTED.

If any of our readers have any, please tell us what you have and what you will take for it, or send what you have by mail, and we will pay you a good price for it.

COIN-SILVER WATCHES.

We have in stock three solid coin-silver watches, stem wind and set, open face, 14 size, with seven jewels, Waltham movement. We offer them post-paid and registered for \$10.00 each. They have a plain 2-oz. case, and we warrant for 30 days.

TIN-CASED GLASSED OIL-CANS.

We are able to offer a tin-cased glass oil-can, to hold a gallon, for 25c each, \$2.80 per box of 1 dozen. These have a spout with stopper, a 1-inch tin screw cap for filling, and a bale to carry by. They would make an excellent article to sell extracted honey in; for when empty it can be put to good use.

MISMATED QUEENS.

We have a few mismated queens in our apiary that we should like to dispose of during the next two weeks. They are good thrifty queens, reared from pure Italian mothers, but their progeny does not show the full markings of Italians, and hence they have to go for hybrids. Price 35c each, or 3 for \$1.00, while they last.

EXTRA WHITE COMB HONEY.

We have secured about two tons of very fine white comb honey from Matthias Schneider, Jr., of Iosco County, Mich. About half of it is in 12-lb., the rest is in 24-lb. glassed cases. The net weight is about 11 and 22 lbs. each. We offer this at the following prices: Less than ten 12-lb. or five 24-lb. cases, 18c per lb. From 10 to 50 of the 12-lb. and 5 to 25 24-lb., 17c per lb. Above this amount, 16 cents.

HENIS FRUIT-PRESS ADVANCED.

We regret to be obliged to withdraw the present low price on this very convenient and useful household utensil that has met with such favor. Since we first offered it for sale about a year and a half ago, we have sold nearly 10 gross. Recently a new firm has taken hold of it; and as it is patented, they, of course, control the price. Their first move is to advance the price to nearly double what it was. For the present the price will be 35c each; \$3.50 per dozen, or \$9.00 per box of 3 dozen.

SECOND-HAND TYPE FOR SALE.

Our readers will discover that this issue of GLEANINGS is in a new dress of type. Instead of setting part in nonpareil and part in brevier we have fallen in with the general custom, and use only one size, called minion, the articles being set solid, and the answers leaded. This leaves us with about 350 lbs. of second-hand brevier type in fairly good condition, which we offer for sale at 20c per lb., which is about

half the price of new type. If you don't want so much, write, naming the amount you can use, and we will make a price. We would much prefer to sell all in one lot, and that is why we make the price so low.

ARIZONA HONEY.

In the two weeks that have elapsed since the carload of honey reached us from Arizona we have disposed of all the comb honey and nearly a third of the extracted. After writing the notice for last issue we found that there was in the car some 2d and 3d grades that we can offer a little lower. We find, also, that nearly half the car is mesquite, which is lighter colored than the alfalfa, and a better flavor, if possible. We will mail samples of any kind or grade free on application. The price is 10c per lb. for one to five 60-lb. cans; 9c per lb. for from 3 to 10 cases of 2 cans each. In lots of 10 cases (1200 lbs.) or more, 8c per lb. Second grade, ½ cent per lb. less; 3d grade, 1 cent per lb. less than 1st grade. These 2d and 3d grades are not far below the first; but if you hesitate about buying, send for a sample which we will mail free on application.

THE ILLUSTRATED HOME JOURNAL.

This excellent monthly home magazine is published by Thos. G. Newman & Son, the editors of the *American Bee Journal*. It is a 32-page monthly, fully illustrated on nearly every page, and brimful of good, clean, interesting reading. Every number, we notice, also contains a song with music. It is a journal that ought to be in every home; and to make it still easier for you to place it there, the publishers have made us a proposition whereby we can club it with GLEANINGS one year for only \$1.35, and all new subscribers will receive the *Home Journal* for the rest of this year and all of 1891. Just think of it! If you subscribe now for GLEANINGS and the *Illustrated Home Journal*, sending \$1.35, you will receive fifteen numbers of the journal for the extra 35 cents—only a little over 2 cents each. This is a magnificent offer that many should accept. We will club the *American Bee Journal* along with the two for \$2.25.

KIND WORDS FROM OUR CUSTOMERS.

I received the 24 pumps all right from Canton, and they give satisfaction. JOHN A. SARVER.
Morton, Ill., Aug. 21.

PROMPTNESS IN SENDING QUEENS.

The dollar queen ordered about July 18th came in good condition, and two days sooner than I expected. I am highly pleased with her, and with your promptness. W. J. TAYLOR.
Palo, Linn Co., Iowa, July 24.

THE DAISY WHEELBARROW.

We received the wheelbarrow all right. It pleases the whole family very much. We have all taken a ride on it, even to Mrs. R., who enjoyed the wheelbarrow very much, but thought her horse a little frisky and unsteady. ARTHUR T. REED.
Oberlin, Ohio, July 29.

OUR METHOD OF SHIPPING STRAWBERRY-PLANTS.

The 200 Jessie and 50 Bubach plants are at hand, and set out. They could not come in a better shape. You certainly deserve every order sent you, if treated as mine was; all are living, and I am satisfied with your exertions to do as you would be done by. Thanks for the few extra ones. GEO. W. BALDWIN.
Forest City, Mo., Aug. 20.

PLEASED WITH OUR FOUNTAIN PEN.

I am just in receipt of the Bateman fountain pen, ordered of you, and I herewith wish to express my satisfaction in using it. Fountain pens have been very extensively advertised in the papers for some years past, but I thought I could not risk to invest in one, until I saw the one recommended by A. I. Root. Then I was sure I should find one just as represented, and I ordered one forthwith. I can say that I am well pleased with it so far, and have no doubt but that it will continue to do good service for a long time. SAMUEL E. MILLER.
Bluffton, Mo., July 26.

Wire Cloth.

For door and window screens, tacking over hives and nuclei for shipping, making bee and queen cages, and a variety of purposes. We have the following list of green and black wire cloth which is not exactly first class, but is practically as good for the purposes mentioned, and at prices MUCH BELOW the ordinary price. You can no doubt select from this list a piece to suit your needs. Price in full pieces, 1½ cts. per square foot. When we have to cut it, 2 cts. In case the piece you order may have been taken by some one else before your order comes, please say whether we shall send the nearest in size, or cut one the size ordered at 2 cts. per ft., or give a second or third choice.

No. of Rolls, and Color.	Width, In's.	Length, Ft.	Sq. Feet.	Price of a Full Roll.	Pieces less than 100 ft. long. These figures are the number of square feet in each piece. Multiply by 1½ cents for the price of piece.
10 green	8	100	67	\$1.17	65, 65, 64, 63, 63, 62, 54, 40, 33
25 green	12	100	100	1.75	44, green; price 77 cts.
2 green	16	100	133	2.33	
1 black	22	71	128	2.24	110 sq. ft., black; price \$1.92
5 green	24	100	200	3.50	140, 40, 30, 8, green; 200 black.
54 green	26	100	217	3.50	This is below reg. pr. of 1½ c.
14 green	28	100	233	4.08	224, 224, green.
7 green	32	100	267	4.67	133, green; price \$2.33.
10 green	34	100	300	5.25	309, black; price \$5.25
6 black	38	100	317	5.54	269, black; price \$4.70
6 green	38	100	317	5.54	258, black; price \$4.50
3 black	40	100	333	5.83	317, black; price \$5.54
8 black	42	100	350	6.12	350, green; price \$6.12
1 green	44	100	367	6.42	

A. I. ROOT, Medina, Ohio.

SECTIONS.

\$2.50 to \$3.50 per M. Bee-Hives and Fixtures cheap.

NOVELTY CO.,

Rock Falls, Illinois.

6tfdb

Please mention this paper

1890 ITALIAN QUEENS. 1890

Six young queens, warranted purely mated, for \$5.00. English rabbits, \$1.00 per pair. Mammoth bronze turkey eggs, 25c each; 9 for \$2.00. Send for circular 7tfdb

J. T. WILSON.

Little Hickman, Ky.

Cash for Beeswax!

Will pay 25c per lb. cash, or 28c in trade for any quantity of good, fair, average beeswax, delivered at our R. R. station. The same will be sold to those who wish to purchase, at 31c per lb., or 35c for best selected wax.

Unless you put your name on the box, and notify us by mail of amount sent, I can not hold myself responsible for mistakes. It will not pay as a general thing to send wax by express.

A. I. ROOT, Medina, Ohio.

Barnes' Foot-Power Machinery.



Read what J. I. PARENT, of CHARLTON, N. Y., says — "We cut with one of your Combined Machines last winter 50 chaff hives with 7-inch cap, 100 honey-racks, 500 broad frames, 2,000 money-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it all with this Saw. It will do all you say it will."

Catalogue and Price List Free. Address W. F. & JOHN BARNES, 545 Ruby St., Rockford, Ill.

When more convenient, orders for Barnes' Foot-Power Machinery may be sent to me. A. I. ROOT. 23tfdb

VANDERVORT COMB FOUNDATION MILLS.

Send for samples and reduced price list.

JNO. VANDERVORT Laceyville, Pa.

Alley's Business Queens

ONE DOLLAR EACH.

HENRY ALLEY, - - WENHAM, MASS.

Please mention GLEANINGS.

15tfdb

CARNIOLAN * QUEENS,

Circulars giving special prices for Carniolan queens, bred the remainder of the season from pure and gentle mothers, the workers of which can not be surpassed as honey-gatherers. Send for circular.

JOHN ANDREWS,

15tfdb

Pattens Mills, Wash. Co., N. Y.

In responding to this advertisement mention GLEANINGS.

PASTEBOARD BOXES,

Or Cartons, for One-Pound Sections.



Bee-keepers are realizing more and more the value of these cartons for putting their comb honey in marketable shape. Other articles of home consumption are put up in a neat attractive way, and in shape to be handed to the customer, and carried safely without wrapping. Why not sections of comb honey, especially when the cost of the boxes is so low?

TABLE OF PRICES OF 1-LB. SECTION CARTONS.

Name or designation.	Price of 1	25	100	500	1000
1-lb. carton, plain.....	2	.20	.60	2.75	5.00
1-lb. carton, printed one side, name and address.....			.90	3.50	6.00
1-lb. carton, printed on both sides, name and address.....			1.00	3.75	6.50
1-lb. carton, with lithograph label, one side.....	3	.30	1.00	4.50	8.50
1-lb. carton, with lithograph label on both sides.....	3	.40	1.30	6.25	12.00
1-lb. carton, with lithograph label one side, name printed.....			1.30	5.25	9.50
1-lb. carton, with lithograph label, printed with name on both sides,			1.70	7.25	13.50
Lithograph labels, 2 designs, for 1-lb. cartons.....		.35	1.60	3.00	

If sent by mail, postage will be 2 cts. each; or in lots of 25 or more, 1 cent each. All the above have tape handles. Price, without tape handles, 5c per 100, or 75c per 1000 less. The quality of the boxes is fair, being made of strawboard, plated outside. If more than 1000 are wanted, write for prices.

A. I. ROOT, MEDINA, O.

LITHOGRAPH LABELS

In 12 Colors, at \$2.00 per 1000.

The 12 colors are, all on each label. They are oblong in shape, measuring 2½x2½. They are about the nicest labels we ever saw for glass tumblers, pails, and small packages of honey. We will mail a sample, inclosed in our label catalogue, free on application, and will furnish them postpaid at the following prices: 5 cts. for 10; 35 cts. for 100; \$1.20 for 500; \$2.00 for 1000.

A. I. ROOT, Medina, O.

A Four-Color Label for Only 75 Cts. Per Thousand!

Just think of it! we can furnish you a very neat four-color label, with your name and address, with the choice of having either "comb" or "extracted" before the word "honey," for only 75 cts. per thousand; 50 cts. per 500, or 30 cts. for 250, postpaid. The size of the label is 2½ x 1 inch—just right to go round the neck of a bottle, to put on a section, or to adorn the front of a honey-tumbler. Send for our special label catalogue for samples of this and many other pretty designs in label work.

A. I. ROOT, Medina, Ohio,

Our Motto: BEST GOODS at LOWEST PRICES.

The Immense Demand for our Hives, Sections, Comb Foundation, and other Bee-Keepers' Supplies, during last season, was more than we were prepared to take care of, and in consequence, like many of our competitors, we were at times very much behind our orders, causing much dissatisfaction to our customers. However, we *tried* to do *justice* to all.

We take pleasure in announcing to our friends, that we have more than doubled our capacity by large additions to our factory and machinery, and we will hereafter be able to supply all your needs promptly, with goods of which the material and workmanship can not be excelled.

LARGE ILLUSTRATED CATALOGUE FREE.

Address **The W. T. FALCONER MFG. CO.,**
Jamestown, N. Y.

USUAL WINTER DISCOUNTS ARE NOW GIVEN.

☞ In responding to this advertisement mention GLEANINGS.

ESTABLISHED IN 1864.

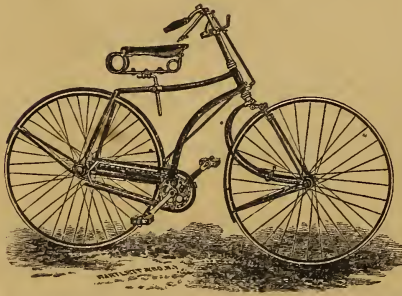
BEE SUPPLIES.

Wholesale and Retail.

40-page Illustrated catalogue FREE to all. 4tfdb Address **E. KRITCHMER, Red Oak, Iowa.**

☞ In responding to this advertisement mention GLEANINGS.

→ VICTOR * BICYCLES ←



Will carry you up hill easier
and down hill faster than any
others you ever mounted.

ALL INTERCHANGEABLE.

ALL HIGH GRADE.

ALL RIGHT.

Send for Catalogue.

OVERMAN WHEEL CO., Makers, Chicopee Falls, Mass.

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AL-BI-NO.

Do you want to take the premium at your fair this fall? If so, send for my prices on two and three frame nucleus of the most beautiful and gentlest race of bees known.

—THE ALBINO.—

Send for a queen and be convinced. 15-17d

A. L. KILDOW & BRO., Sheffield, Ill.

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PATENT WIRED COMB FOUNDATION

HAS NO SAG IN BROOD-FRAMES.

THIN FLAT - BOTTOM FOUNDATION

Has No Fish-bone in Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made.

J. VAN DEUSEN & SONS,

Sole Manufacturers, 5tfdb

Sprout Brook, Montgomery Co., N. Y.

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ITALIAN QUEENS CHEAP.

We will sell Italian queens at the following low prices: Tested, 85 cts.; one-half doz., \$4 75; untested, 65 cts. each. Satisfaction guaranteed.

LEININGER BROS., Douglas, Putnam Co., Ohio.

"BANNER" Years ago, when I began working with my brother, the editor of the *Review*, his apiary was called the "Banner Apiary." A large share of this apiary is still kept at the old place, where I manage it on shares. It is stocked with a fine strain of Italians, and I have been saving the best cells from the best colonies, when they swarmed, and having the queens hatched and fertilized in nuclei. These queens I offer at 75 cts. each, or three for \$2.00. No black bees near here. Can fill orders promptly, and will guarantee safe arrival. Make money orders payable at Flint, Mich. Address

15tfdb

ELMER HUTCHINSON,
Rogersville, Genesee Co., Mich.

N. B.—Bees are now working on buckwheat, and swarming. I can still furnish queens reared by the swarming impulse. E. H.

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